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WILD BEASTS
AND THEIR WAYS

THE HIPPOPOTAMUS. *Frontispiece.*

WILD BEASTS AND THEIR WAYS

REMINISCENCES OF EUROPE, ASIA, AFRICA, AND AMERICA

BY

SIR SAMUEL W. BAKER
F.R.S., F.R.G.S., ETC. ETC.

BRONZE CAST OF BOAR

VOL. II

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ERRATA

Page 65, lines 3, 4, *for* "and I knocked over another" *read* "I assumed the offensive, and knocked over another."

Page 95, line 11, *for* "the longest one I have ever shot" *read* "the longest I have ever shot."

Page 207, line 4, *for* "Prada" *read* "Prater."

Page 244, lines 8, 9, *for* "although I was tolerably weather-proof" *read* "although tolerably weather-proof."

CHAPTER XII

THE HIPPOPOTAMUS

AFRICA is the only portion of the world which produces this extraordinary animal, and we find it distributed in almost all rivers that are comprised within 26 degrees of latitude North and South. It is supposed that in a remote age the hippopotamus of the Nile extended its journey towards the north as far as Cairo, but it has been driven towards the south by the increase of traffic, and is now limited to the distant portion of the Soudan in the neighbourhood of Dongola. Even there it is scarce, and no great numbers are to be seen north of Khartoum, N. lat. 15° 30′, although the animals actually exist, and take refuge upon the wooded islands of the Nile throughout its course from Berber to Abou Hamed.

It is curious to observe how a comparatively short interval of time will effect a change in driving animals from a particular neighbourhood, and compelling them to seek seclusion by travelling distances that would to some persons appear incredible. I well remember that twenty-

eight years ago I saw crocodiles in considerable numbers at Dendera upon the lower Nile, far to the north of the cataracts at Assouan. These creatures have disappeared, and the disturbance occasioned by steamers has not only exiled them from their old haunts upon the lower river, but they are become scarce where they were exceedingly plentiful twenty years ago, between the first and second cataracts to Wady Halfa.

When we have been ourselves eye-witnesses of such a change within the short interval of a few years, it becomes easy to comprehend the disappearance of the hippopotamus during the last thousand or fifteen hundred years. This animal, in like manner with the crocodile, would not migrate suddenly to a distant point, but would gradually recede before advancing civilisation, and would disappear from a district by slow degrees that would hardly be appreciated at the time of its retreat.

The hippopotamus is heavier than the black rhinoceros, but would be about equal in weight to the white variety; it may therefore be ranked as second in weight to the elephant. The flesh and hide are more dense than those of the elephant, which causes it to sink immediately when shot within deep water; if within 25 feet depth, the body will ascend and float when the gases shall have distended the carcase, which will take place in about two hours.

The specific gravity would be greater than

the displacement in water, but so nearly balanced that the animal can rise to the surface with very slight muscular exertion; and it can at the same time run along the bed of the river at great speed, as hardly any weight would press upon the limbs, the body being almost self-supporting in the water.

The feet of the hippopotamus are shaped in a peculiar manner, which enables it to clamber up greasy and slippery mud-banks, at the same time that they are well adapted for swimming, or for travelling upon the spongy bottom. There are only four toes upon each foot; these are tipped with horny points, which afford good holding power either for ascent or descent. The toes spread widely upon soft ground, and although not actually web-footed, the skin between each toe expands to a certain degree, which assists the animal's progress when swimming by offering a considerable surface for resistance to the water.

I measured a bull hippopotamus, 14 feet 3 inches from snout to end of tail; the latter being about 9 inches.

The legs are exceedingly short, being in the same proportion to the height of the animal as those of a well-bred pig. The head is enormous, and the mouth is the largest of any terrestrial creature in existence. Cuvier describes the teeth as follows:—"Six grinders on each side of both jaws, the three anterior of which are conical, the posterior presenting two pair of points, which by

detrition assume a trefoil shape; four incisors above and below, those of the upper jaw being short, conical, and recurved, the inferior prolonged, cylindrical, pointed, and horizontally projecting; a canine tooth on each side above and below, the upper straight, the lower very large and recurved, those of the two jaws rubbing against each other."

The tusks exactly resemble, on an enormous scale, those of the wild boar, and the lower tusks are sharpened in the same manner, by attrition against the upper. The enamel upon the surface of the two defensive tusks is extremely thick and hard: the amount of silica in its composition is so great, that, in cutting out the tooth with an axe, showers of sparks are occasionally produced, when the steel strikes the tusk obliquely.

The front teeth of both jaws appear to be specially arranged as scarifiers for raking and tearing out roots of aquatic plants, or for gathering tangled grasses from the river's bank. Although the skull is of prodigious size, the brain is very small, in no case exceeding the size of a man's fist. The eyes are large, and are surmounted by a projecting arch of bone, which is a peculiar feature; the ears are small, and the animal has a habit of shaking them with great rapidity, to rid them of water when it first emerges upon the surface. The tail is exceedingly short, and is flat upon the sides; this can be of no service practically, as it is too small to act as a rudder when swimming, and

Nature can only have added it as the termination of the ugliest of her handiworks. The nose of the hippopotamus is an enormous protuberance, which includes a firm and cartilaginous upper lip.

Stupidly ferocious when in the water, the bull will frequently attack a boat without the slightest provocation; but if disturbed when on land, it will immediately retreat to the concealment of the river's depths by plunging off the bank. I have seen them recklessly jump or tumble from a precipitous bank 12 or 16 feet in height, and fall into the water with an extraordinary commotion, when suddenly intruded upon in a mid-day's sleep beneath some shady trees.

There are exceptions to all rules, and although this stupid animal will generally retreat from man, I have known two instances when fatal accidents occurred on shore. One of these was upon the Atbara river, during the dry season, when the Arabs cultivated water-melons upon the exhausted bed, near a large and deep pool, from which they obtained the water necessary for irrigation. The hippopotami amused themselves with munching ripe water-melons during the night, and when the proprietor appeared to drive them from his garden, he was immediately seized in the jaws of a well-known bull and destroyed by one crunch of the terrible rows of teeth.

On another occasion I had wounded a very ferocious bull that was an old enemy of the natives, near a village on the borders of the White Nile.

On the day following they went in search, and discovered the animal lying upon a sandbank in a shallow portion of the river. Considering that it was helpless, they descended the bank, and approached it with their spears, but it immediately rushed upon the foremost man, and bit him into halves by seizing him at the waist.

I was visited by a sheik of the Shillook tribe when camped at a station upon the White Nile; this old man was blind, and he was paddled across the broad river by his son in a canoe formed of the stems of an exceedingly light wood known as ambatch. Upon the return journey, just as he had left me to recross the river, a bull hippopotamus ascended from the bottom, seized the frail canoe, together with the blind sheik, in his jaws, and reduced the little vessel to a hundred fragments, killing the old man at the same moment. I was standing upon the bank, and witnessed the splash of the attack and the utter wreck of the canoe, while the sheik's son swam in consternation to the shore.

The skin of a bull hippopotamus is from $1\frac{3}{4}$ to 2 inches thick. The entire hide when fresh would weigh about 5 cwts. Although I never actually weighed a skin, I once skinned a big bull with the intention of preserving it, and when, after great exertion, we succeeded in loading a powerful camel, it could hardly carry the weight. The usual desert load for a good camel is 500 lbs., therefore I concluded that the skin which caused a difficulty

must have far exceeded the weight to which the animal was accustomed.

It is difficult to decide the limit of time during which a hippopotamus can remain beneath the water. The nostrils have the power of closing, with the action of valves, and the animal sinks itself with the lungs inflated. The blood is nourished with oxygen from this supply of air during immersion, and when the animal appears upon the surface, it blows out the expended air with a peculiar snort, accompanied by a jet of spray, very similar to the manner in which the whale and other cetacea "spout."

Precisely in the same way the hippopotamus blows off the impure air, and again refills the lungs by an instantaneous effort like the cetacea; and by the time that the eye detects the jet of spray, the lungs have been emptied and again inflated.

I have very frequently observed, and taken the time by my watch, but I have found that hippopotami vary in the times of total immersion. Five minutes is about the usual interval of breathing, when it becomes necessary for the animal to ascend for a fresh supply of air, but this depends upon circumstances, as the hippo can sustain ten minutes without fresh air, should it choose to remain concealed.

If a hippopotamus has been shot at several times, and is only slightly wounded, it will remain as long as possible beneath the water, and when

it appears upon the surface, it will, in an artful manner, only expose the great round nose; this will just break the water for the tenth part of a second, during which the air will have been exchanged and the lungs inflated instantaneously.

Although it is a stupid animal, it certainly exhibits a considerable amount of cleverness, in thus preserving its head from attack, and when it takes to such tactics as exposing no other portion than the nose, it is quite impossible to shoot with any effect.

At a former period the tusks of the hippo were more valuable than the ivory of the elephant, as they were in request by dentists for artificial teeth. Their superiority to ordinary ivory consisted in the permanence of colour, as they never turned yellow. For this reason the price was exceedingly high, as much as 25s. per lb. having been given at the commencement of this century. It was necessary to clean off the hard enamel by a revolving grindstone before it was possible to manufacture the close-grained material beneath. The American invention of porcelain enamel for artificial teeth has destroyed the value of hippopotami tusks, which are now lower in price than the ivory of elephants.

The value of the hippopotamus depends at present entirely upon its hide and fat; the former is used for whips, and for facing revolving wheels when polishing steel surfaces. Hippopotamus fat is excellent, being free from any strong flavour, and

closely resembling lard in consistency when boiled and clarified. A well-conditioned hippo will yield about 200 lbs. of pure fat, which is much esteemed by the Arabs, as their domestic animals are usually devoid of anything beyond muscles, both hard and lean.

I have never seen a female with more than two young ones, and very frequently with only a solitary calf; they are affectionate mothers, and the little ones usually stand upon the back of their careful parent, who swims about with them and occasionally brings them to the surface in the same position, whenever she considers that they require fresh air.

They are pugnacious brutes among themselves, and the bulls are constantly fighting during the night, roaring bellicose challenges to each other in prolonged deep-toned snorts, that vibrate through the bottom of the vessel when moored for the night on the desolate White Nile.

I have frequently witnessed tremendous combats between bull hippopotami, when they have appeared upon the surface with their huge jaws locked together, and utterly regardless in their fury of any external danger. Upon one occasion, in a very narrow channel of the labyrinth-like branches of the White Nile, I found a herd containing numerous individuals; and as the channel was hardly 30 yards in width, they were completely at my mercy whenever their heads were above the surface. There are two certain shots with a

powerful rifle—one behind the ear when the animal is looking in an opposite direction, the other exactly beneath the eye when you are *vis-à-vis*; both of these shots reach the brain. I had fired with great rapidity, and the breechloader had been very fatal; the channel being narrow, and perhaps only 9 or 10 feet deep, a great commotion was caused by fifteen or twenty hippopotami, some of which were wounded, others, that were killed, had sunk to the bottom, and the remainder were in a frantic state of excitement. Presently a wounded bull rose to the surface, and snorting a jet of bloody spray, it rose several feet out of the water: immediately another bull appeared upon the scene, and with open jaws it seized its comrade by the neck and held on like a bull-dog. The fight continued for two or three minutes, and although I was standing unconcealed upon the bare and open bank not 3 feet above the channel, the two animals fought and wrestled together until, coming within 4 or 5 yards of my position, I put a ball behind the ear of one, and into the head of the other with the left-hand barrel, which settled the affair. I had more than 1500 men to feed, therefore I was not in the humour to lose an opportunity.

There is no animal that I dislike more than the hippopotamus, if I am compelled to travel at night upon an African river in an ordinary boat. There is no possibility of escape should a hippo take the idea into his head that your vessel is an enemy. The creature's snort may be

ATTACK UPON WOUNDED HIPPO. VOL. II. P. 10.

heard at a few yards' distance in the darkness, and the next moment you may be overturned by an attack from beneath, where the enemy was unseen. I have sometimes been benighted when in an open boat, having been exploring throughout the day; in returning across a lake, guided by the well-known signal (a red light hoisted at the masthead of my diahbeeah), I have heard the snorts and the threatening splashing of hippopotami around our dinghy, momentarily expecting a blow from below that would send us flying, and capsize us helplessly in the dark. All of my boats were more or less damaged by hippopotami in the course of three years' work upon the upper Nile. On one occasion there was a boat full of sheep being towed astern of the diahbeeah, which was going 6 or 7 knots before a favourable wind, when a hippopotamus suddenly charged from beneath, threw the boat completely out of the water, knocked a big hole in her bottom, and capsized her with all the sheep, every one of which was drowned. On another occasion we were in a very large flat-bottomed canoe, cut out of a single tree. The floor of this was at the least 3 or 4 inches thick, and happily it was a tough quality of wood. This heavy canoe was 27 feet in length, but when approaching a bank of high reeds, a hippopotamus charged from beneath, and struck the bottom with such force that the canoe was actually lifted partially from the water; had it been an ordinary boat,

the bottom would have been knocked out, and we should have been capsized.

Dr. Livingstone describes an accident which befell him, when his large canoe full of natives was thrown into the air, and capsized with the entire crew, by a savage hippopotamus when descending some channel of the Zambèsi.

Accidents were frequent with these animals. In broad daylight a hippo charged the steamer that was towing my diahbeeah. Not content with breaking several floats off the paddle-wheel, it reappeared astern, and, striking the bottom of our iron vessel, it perforated the plates in two places with its projecting tusks, causing a dangerous leak.

Our vessel was filling rapidly, although, the steamer having dropped astern to our assistance, we discharged our cargo upon her deck, and at the same time kept pumping and baling out with every conceivable utensil. At length the engineer succeeded in finding the two holes with his naked feet, which he used as stoppers until we were able to reduce the water. He then repaired the damage with a clever impromptu device, by covering a small plank thickly with white lead and tow, mixed together, and laid 2 inches thick upon a piece of felt. This was inverted upon the two holes; a man stood upon the plank, thus pressing the tow and white lead into the apertures. In the meantime an upright batten was fixed from beneath a cross-beam, upon

the plank, and a wedge was driven to tighten the pressure of the batten; this secured the plank across the leaks.

A hippopotamus can move at a considerable pace along a river's bed. We had proof of this while running down the Bahr Giraffe with the steamer, the speed with the stream being about 10 knots an hour. The river was narrow, and in places rather shallow. We observed the head of a very large hippopotamus, which rose and snorted upon the surface about 100 yards ahead of the vessel. When the animal disappeared, we could plainly see the wave that denoted the course of the hippo which had this long start in an exciting race. There was very little space upon either side in the narrow channel, and we felt sure that if the hippo continued a straight course, we should either run over it, or be struck should it turn to charge.

It was some time before we actually gained upon it, but when the engineer put on full steam, there could be no doubt of our superiority in speed. The wave in the river was close under our bows, and in another moment the steamer of 108 tons gave a leap, as we rose over the body of the hippopotamus, in water that was too shallow to permit it to pass beneath our keel. We had no means of ascertaining the fate of this animal.

The most ferocious attack that I have ever

witnessed occurred in the Bahr Giraffe, at a time when we were cutting a passage for the flotilla of fifty-seven vessels through the obstruction caused by aquatic vegetation, which had accumulated to an extent that blocked the navigation of the river. During the middle of the night a bull hippopotamus charged our diahbeeah, and sank a small boat that was fastened to the side. The infuriated beast then bit the side out of a boat that was 17 feet in length, and the crash of splintered wood betokened its destruction. Not satisfied with this success, it then charged the iron vessel, and would assuredly have sunk her if I had not stopped the onset by a shot in the skull with a No. 8 rifle. This hippopotamus was evidently a desperate character, and I concluded that it must have been attracted to our vessel by the smell of blood, as the small boats destroyed had contained flesh that had been cut into strips from the body of a hippo which I had shot on the previous day. There was an additional provocation in the presence of a dead hippo, which I had fastened to the rudder, as we had no time to prepare the flesh; this was floating astern, and assisted in arousing the fury of the ill-tempered bull. When I succeeded in killing this animal, after an exciting defence, we discovered that it had been frequently scored by the tusks of antagonists of its own species; one wound was several feet in length along the flank, and was recently healed. The scars of

numerous conflicts were a sufficient evidence of a vicious character.

The Hamran Arabs and some other tribes attack the hippopotamus with the harpoon. I have witnessed these hunts, which are intensely exciting.

When a small herd of these animals are floating upon the surface, basking half-asleep in the mid-day sun, a couple of hunters enter the river about 200 yards up-stream, and swim cautiously with the current in their favour until they arrive within 5 or 6 yards of the nearest hippo. They hurl the harpoons simultaneously, and at the same instant they dive beneath the surface, and swim in an opposite direction, making direct for the nearest shore.

The hippo, if well struck, is fixed by two harpoons, to each of which a rope is attached. A float of exceedingly light wood, the size of an ordinary man's head, is secured to the extremity of each rope, and these are arranged in lengths proportioned to the maximum depth of the river, generally about 30 feet.

When the hippopotamus feels the wound, it immediately plunges to the bottom, and rushes madly to and fro until it again rises to the surface to take breath. It at once perceives the large float at the extreme end of the line, and, frightened at the unaccustomed object, it seeks the concealment of the bottom.

In the meantime the hunters have safely landed,

and are joined by their numerous companions, well provided with long ropes, and armed with spare harpoons and well-sharpened lances.

The difficulty of capturing the hippopotamus would at first sight appear most formidable, but a very clever, though simple, plan enables the hunter to secure the float which is fastened to the harpoon line. The river may be about 150 yards in width. One of the hunters swims across, or wades if he can find a shallow ford, about 100 yards above the spot where the float upon the surface denotes the place beneath which the hippo is hidden in the river's depths. The man who crosses over takes the end of a long rope. This is more than sufficient to reach from bank to bank, and either end is now in possession of a howarti (hippo-hunter). An exceedingly strong but a lighter line is fastened to the centre of the rope, which is now stretched across the river, and the end of this second line is held by the same man who holds the superior rope; thus, upon one shore a man holds one end only, while upon the other shore his companion holds the extremities of two lines, one being fastened to the *middle* of the larger or main rope.

It may be easily understood that the angle may be increased or decreased simply by widening the base through an extension of the two ends of the lines.

In this manner the two hunters advance upon either bank, dragging the rope upon the surface

until they can touch the float which they intend to secure. They manipulate their lines in a manner that enables them to catch the float between the two ropes. When this is accomplished, the hunter on the opposite side of the river slacks off his rope, as his companion joins his two lines together and hauls upon the float, which is now secured in the angle between them. The man who has let go his end of the rope now rejoins his companions, and they all haul away upon the lines that have captured the float, to drag the hippopotamus towards the shore.

The fun begins; the hippo, feeling that it is dragged, offers the greatest amount of resistance, but by degrees, and with careful management, it is guided within striking distance, and another harpoon is fixed within its stubborn hide. There is no longer any delicacy necessary, as the collective power of the hunters can be distributed upon the various ropes attached to their respective harpoons, without fear of breakage.

I have seen a hippopotamus, under these conditions, quit the refuge of deep water and boldly challenge the crowd of his pursuers by landing upon the bank and making a general onslaught upon them. These splendid fellows fought the enraged animal with lances, some of which were caught and crushed within its powerful jaws. But the most telling defence was made with handfuls of sand, which, thrown in the prominent eyes, immediately forced the half-blinded beast to

retreat to the welcome river, where it could wash, and prepare for a renewal of the conflict. Upon one occasion I saw a hippopotamus, which, when harpooned, had emerged from the river to attack the hunters, return over and over again to the charge, until it had smashed and broken so many spears that I was forced to terminate the fight by a bullet in its brain.

The natives of Central Africa do not advance to the attack by swimming like the Hamran Arabs, but they harpoon the hippopotamus from canoes; and they are frequently upset by the infuriated animal before they have time to escape by paddling. Swimming would be a safer method of harpooning, as the hunter can save himself by diving, unseen by the hippopotamus, which invariably looks upwards when in the water, as it instinctively directs its vision towards the light; but in the White Nile and in the lakes there are crocodiles in such great numbers that few people would presume upon the risk.

Although the hippopotamus affords excellent sport when hunted in this fashion, the ordinary method of shooting these animals in the water exhibits the poorest form of amusement. It is impossible to determine whether it is killed or otherwise, until the body appears upon the surface. The bullet may be heard to strike, and the huge head will instantly disappear, but the most experienced person may be deceived in accepting the shot as fatal, and a sudden snort a few minutes

later will prove)o is in being; after
which it will rare lead to another aim.
A No. 10 ri urately sighted, with
a powder charge ;, is the best weapon
for shooting the the bullet will crash
through the ski frequently stun the
hippo, although e escaped the brain.
Upon such occ nmense creature will
roll over, belly id the frantic kicking
of its short legs vulsive struggles, will
raise an extrao iotion in the water;
until at length ous creature drowns,
through a lon immersion during a
state of uncor I have very often
killed them in with a heavy rifle,
that has crushed the cranium; and upon one occasion the ·577 bullet performed unexpectedly with the same result, although the skull of the animal was only slightly split, and the bullet remained wedged and shapeless in the crevice. The hippo, after rolling helplessly for several minutes, sank to the bottom, reappearing upon the surface a couple of hours later. The skull of this female hippopotamus is in my possession, showing the position of the bullet, which remains fixed upon the bone.

It would be a natural conclusion that the hippopotamus, which is a pugnacious creature, would occasionally attack the crocodile; but although these reptiles are in great numbers, I have never heard of such a conflict. At the same time, I have seen

dead hippopotami t nained a couple
of hours under wat fatal shot; these
were scored in mar the sharp teeth
of crocodiles, which i empted to make
an aperture. I hav the large heads
of these creatures f the surface, in
attendance upon th carcase, proving
that, should an oppo they were ready
to snatch a mouthful hen dead, which
they feared to attack.

There is a probab calves of hippo-
potami may occasiona ff by crocodiles,
but this must remain on, as it cannot
be proved by an eye in such a case,
the attacking party ... ...ly be charged
by the desperate mother.

A young calf hippopotamus is delicious eating. The feet, when stewed, are far superior to those of any other animal, and the skin makes excellent turtle soup. The fresh hide of a full-grown hippo, if cut into small pieces, soaked in vinegar for an hour, and then boiled, so closely resembles turtle that it would be difficult to distinguish the difference. The flesh of this animal is always palatable; and although that of an old bull is tough, it can always be successfully treated, by pounding and beating it upon a flat stone until the fibre is totally destroyed. If this is mixed with chopped onions, pepper, and salt, and wild thyme, it will form either *rissoles* or *côtelettes de veau*, by a pleasing transformation of the old bull.

As the female hippopotamus generally produces one calf at a birth, these huge creatures do not multiply in any great degree, and their numbers in certain places, where they appear to have assembled in large herds, must be accepted as periodical gatherings, which are altogether exceptional, and by no means represent the average area of a locality.

I have seen a bend in the White Nile, during the dry season, which was literally crowded with hippopotami; and as the steamer was coming down the stream at about nine miles an hour, I thought it would be impossible to avoid a collision; somehow they all made way for our passage, and we passed through a crowd of heads, some snorting and blowing jets, while others disappeared in their usual instantaneous manner.

A hippopotamus differs from most aquatic animals, as it sinks backwards, and disappears by throwing its nose upwards; all other creatures dive head first.

In such secluded places as the banks of the White Nile, where dense masses of high reeds fringe the course of the river, far away from any habitation, the hippopotami pass a considerable portion of their time in marshy retreats among the canes; such dens would be impervious to human beings, and would not be observed unless from a vessel upon the river. The tangled mass of vegetation is pierced in numerous places by dark tunnels, which have been bored out by the bulky

forms of hippopotami, and these gloomy routes form their channels of retreat, where they retire to sleep. Females, with their calves, are especially fond of these impervious bowers, where they are secure from all chances of molestation by man or beast.

Although this animal may be shot from the shore, without the slightest danger of an attack upon the hunter, I have described a sufficient number of casualties to exhibit the true ferocity of its nature, when in the element which affords the greatest scope for its activity. Upon one occasion I was a witness to a most unprovoked aggression. We were swimming a herd of several hundred cows across the White Nile, about 20 miles south of Gondokoro: the natives as usual accompanied the cattle, sometimes holding on to the horn, at other times by the tail of a cow, but as they swam they directed the course of their animals by shouts and by the aid of a stout bamboo.

Suddenly the herd was invaded by several hippopotami, and I myself saw their enormous heads and necks emerge from the water, and with opened jaws they seized several cows and dragged them beneath the surface, never to appear again.

This was sheer rage, as the hippo is not carnivorous. It is impossible to know what happened beneath the water, but, as the cows did not reappear, they must have been held at the bottom for a considerable time, until quite drowned.

It may be generally accepted that the hippo-

potamus is a fierce and dangerous animal when in the water, and that it will frequently attack boats, especially at night, or any other object that may attract its senseless fury, but when on land it very rarely ventures to provoke a contest; on the contrary, it prefers retreat, and betakes itself precipitately to the river's bed, where it feels secure from molestation.

The ivory having decreased in value, owing to the American invention of enamel for artificial teeth, and the demand for its hide having been reduced by the British interference in Egypt, where the courbatch (hippopotamus whip) has been abolished, the hippopotamus will remain the undisturbed inhabitant of the great White Nile, monarch of the river; upon which fifteen English steamers were plying when the Soudan was abandoned by the despotic order of Great Britain, and handed back to savagedom and wild beasts.

CHAPTER XIII

THE CROCODILE (*CROCODILUS*)

THIS reptile is an intruder among the mammalia, and may appear out of place in a description of wild beasts and their ways, but it inhabits the same localities as the hippopotamus, and, being equally amphibious, I venture to exalt it to the society of superior animals.

As lizards are found distributed in great varieties throughout the world, in like manner we find the largest of all lizards, the crocodile, under various names, in nearly every river of the tropics. In America this reptile is generally known as an alligator, and some persons pretend to define the peculiarity which distinguishes that variety from the crocodile, but I regard the distinction in the same light as that between the leopard and the panther, the difference existing merely in a name. As we see many varieties of cats which are classed as leopards, in the same manner the different varieties of alligators may be classed under the name crocodile. There is a peculiar species in the Ganges, Brahmaputra, and other Indian rivers

which, although included in the name, exhibits marked variations from all others; this is known as the gavial. The long beak-shaped jaws, with a lump upon the extremity of the nose, distinguish this creature from all other varieties. The gavial grows to a great length, sometimes attaining 20 feet and upwards, but it is deficient in bulk, and is by no means so formidable as other varieties of the species. This creature lives upon fish, and it seldom attacks either men or animals. The head is far longer in proportion than the ordinary crocodile's, and the gavial remains distinct, *per se*, as no instance has been known of a cross, or intermediate variety. In other respects the habits are the same; the female lays her eggs in a sandbank near the river, to the number of fifty or sixty, and when they are hatched by the heat of the sand, the young ones immediately take to the water.

Few persons have the opportunity of witnessing the rapid dash of a crocodile when it rushes towards its prey, but when it is considered that fish constitute the ordinary food, it may readily be imagined that the maximum speed of the reptile must be sufficient to overtake the swiftest swimmer.

The crocodile of the Nile is the same as those of Ceylon and India: in the latter Empire it is generally distinguished as the "mugger," but it is inferior in size to those of Ceylon and Africa, with a few exceptions.

The teeth of this species are specially arranged

for seizing, as they interlock, and the two longest of the lower jaw penetrate through corresponding holes, the points appearing through the top of the upper jaw, above the snout.

There are thirty-four teeth in the upper, and an equal number in the lower jaw. These are hollow, and they are renewed by others which are contained within them; by degrees they develop into a full growth, and at a subsequent period they push out the old teeth and usurp their place, to be themselves displaced upon the same principle in later years.

This special provision of nature for replenishing teeth would infer that the crocodile is a creature which surpasses all others in the duration of life. This is probably a true presumption, excepting the tortoise, which is in some eastern countries the emblem of longevity. There is a tortoise in a garden at Mutwal, near Colombo, which is known to be 150 years old, as it had been for a long time in possession of the Dutch before the British annexation of Ceylon; but its age, when first captured, remains a mystery.

The fore feet of the crocodile somewhat resemble the form of a short human hand; these are armed with five long horny claws, sometimes measuring 4 inches, and are used for holding the prey whilst tearing it with the teeth. The claws of the hind feet are shorter, and are only four in number. It is a mistake to suppose that a crocodile seizes and immediately swallows its victim; it may do so in the

case of small animals, such as fawns which have been captured while drinking from the river's bank, or dogs caught while swimming, but large animals are dragged beneath, and held below the surface until drowned; they are then dragged away to some favourite hiding-place and devoured at leisure.

The male is difficult to distinguish from the female, as the penis and testicles are concealed inside, within an aperture that would be accepted as the female parts. Unlike the snakes, which are double, the crocodile has a single penis. The male produces four glands of musk, two of which are upon either side, beneath the jaws, and two upon either side of the groin. These are highly prized by the Arabs in the Soudan, where crocodile-hunting is pursued as a profession, and the four glands of an average-sized specimen are worth 30s.; those of a very large male would be valued in proportion. The Soudanese women string the musk-glands upon a necklace, together with other beads; when dried they are about the size of a small nutmeg. I have frequently inquired of the natives throughout India, but they are entirely ignorant of the existence of musk-glands in the crocodile. The scent is remarkably strong, and I have frequently been attracted by the odour when, in a vessel passing down the White Nile, we had been forewarned of the basking-place upon the bank, before we had come in sight of the reptile. It is usually considered by the natives that the female is attracted to the spot by the musky exudation from the male. Although the female

possesses an equal number of musk-glands, they are smaller, and not so powerful.

The crocodile is harpooned by the Arabs precisely in the same manner as the hippopotamus, with the exception that, instead of being struck when floating upon the surface, the hunters swim under cover of the bank when they have descried a crocodile asleep upon a bed of sand; the harpoon is then cast, and as the crocodile immediately plunges into the river, the hunters with equal agility jump out. In many portions of the Soudan the hunters are armed with rifles, but the harpoon in dexterous hands is more effective, as the creature seldom escapes. Great numbers of crocodiles may be shot, but very few in proportion are actually secured, as the body sinks immediately in deep water; and, unlike the hippopotamus, it will not rise to the surface for several days, until decomposition shall have set in, and the belly has become inflated with foul gas.

Within the last few years the hide of the crocodile has been generally used for the manufacture of travelling bags and various lighter articles. It is to be hoped that the increased demand may have the effect of reducing the numbers of these reptiles, which are a terrible scourge to every country which they infest. Personally I have studiously avoided a swim in any water inhabited by crocodiles, but it is astonishing to see the risks that are continually incurred by Arabs, whose faith in some special charm, received from a faky or priest, is sufficient

to induce them to brave all dangers, and to defy the fate which so frequently befalls them. There is no possibility of escape should a person be seized in the water, although the crocodile might be of a small size; he would assuredly be dragged beneath the surface.

If the creature should be of large size, the force of the snapping jaws would crush any human bone. As the sixty-eight teeth, which are long and sharp-pointed, fit exactly into the interstices between them, it may be imagined that such a rat-trap formation would effectually preclude escape. The throat of a crocodile is not only large, but is capable of great expansion, and, although the habits of the creature usually permit the body of a victim to rest in quiet until it is devoured in piecemeal, there are many exceptions to the rule; large crocodiles will swallow a small person without the slower operation of dismemberment. Mr. Bennett, in his excellent work upon Ceylon published in 1843, affords an example of this swallowing capacity, which he himself witnessed:—"A native in the act of bathing was seized by a crocodile and swallowed, with the exception of the head and one hand, which were found on the margin of the river; from which it was inferred that the poor victim had seen the animal approach, and had endeavoured to save himself, but was overtaken just as he had grasped the overhanging branch of a tree in the last fruitless effort to escape.

"Immediately upon the report reaching the

collector of the district, James Agnew Farrel, Esq., he ordered a general search for the amphibious monster; which on the second day proved successful; for just as our picnic party was about to sit down to dinner, two carts lashed together, and containing the body of the animal, which was 17½ feet in length, were driven to the door. We had it removed instantly to the sea-side, and opened; when the body of a native, already a mass of putrefaction, was taken out, and a coroner's inquest held upon the spot."

This is direct and interesting evidence, as we have not only the description of an eye-witness, but the length of the crocodile is given, 17½ feet. We thus have an undeniable fact that a creature of that length can actually swallow an ordinary human being, if it chooses. Crocodiles have been frequently killed in Ceylon that have measured 22 feet, and there can be little doubt that this length is occasionally exceeded. I have seen the teeth sufficiently large to form boxes for carrying percussion-caps, before the days of breechloaders. The power of the jaws is terrific, and I have had the metal of a large hook, the thickness of ordinary telegraph wire, completely bent together, the barbed point being pressed tightly against the shank, and rendered useless; this compression was caused by the snap of the jaws when seizing a live duck which I had used as a bait, the hook being fastened beneath one wing. The crocodile took the bait, but I made a mistake in immediately

striking and hauling upon the line. After a rush of a few yards, the monster sulked among the aquatic reeds at the bottom of the lake, until prodded by a harpoon from a canoe, which I had sent to disturb it. The boatman could not pierce through the thick scales; and suddenly the line slackened, and I hauled up my line, at the end of which was a completely flattened duck, together with my hook, compressed and useless, as I have described.

I have shot immense numbers of crocodiles in various countries, and, if upon the shore, I have generally secured them. A very accurate rifle is necessary, as there are only two points that are immediately fatal—No. 1 is just behind the eye, No. 2 exactly through the centre of the shoulder. The latter shot will break both joints of the fore legs, and will pass directly through the lungs. Although I prefer a ·577 rifle, the ·450 solid bullet will be always fatal, if it is placed exactly as I have described.

The hard scales of crocodiles were said to be proof against a rifle bullet. This may have been the case at the beginning of the century, when rifles were loaded with only 1 dram of powder; it was at that date that the grizzly bear was considered almost bullet-proof, when the first settlers encountered it with no better weapon than the No. 70 pea-rifle; but a hardened solid bullet, propelled by 6 drams of powder, will drive through a crocodile like a sheet of paper.

General H. Browne, when at Jubbulpur, showed me a ·577 solid bullet, $\frac{1}{10}$ tin, which he had fired completely through a large crocodile when lying on the margin of the river, and he dug the bullet out of the hard bank, into which it had penetrated for at least 1 foot. This bullet was so little injured in form that it might have been used a second time.

Although the hippopotamus and the crocodile are both amphibious, there is a vast difference between them in the power of remaining under water. The former has enormous lungs, which, when inflated, contain sufficient air to nourish the blood during five, or at the most ten minutes, at the expiration of which it is compelled to reappear upon the surface.

The crocodile has valves which close two small orifices in lieu of ears, and also the nostrils, but the lungs are not extraordinary in size, in proportion to the weight of the reptile. Notwithstanding this apparent inferiority in lung capacity, it can remain beneath the water for almost any length of time, and when it appears upon the surface, it does not blow out a jet of spray, neither does it exhibit any sign of a desire for inhalation, but it merely looks around, as though scrutinising the immediate neighbourhood, either in search of prey, or in the fear of danger.

The crocodile has the power of hybernating. This may be seen in many parts of India, where these creatures exist in small lakes or tanks, which are perfectly exhausted during the hottest season.

At that time there cannot be the slightest doubt that they are buried in the mud, which dries and hardens above them, in which torpid state they exist until released by the refilling of the tank in the rainy season. Under such conditions the crocodile never grows to a large size, but it is limited to 8 or 9 feet.

The largest that I ever saw were of such extraordinary dimensions that I could scarcely believe the reality, although within only a few yards of our canoe; I had a life's experience among these creatures, but I never had the faintest conception that such monsters were in existence. We were travelling up the Victoria Nile,—my wife, myself, and two attendants, in addition to the native crew of a very large canoe (about 30 feet in length). Another canoe was about 50 yards astern, full of wounded men: the troops were marching through forest parallel with the river; this was about 500 yards in width, very deep, with a current so slight as to be almost imperceptible. There had been serious fighting during a forest march of seven consecutive days, and although we were approaching a friendly tribe, I did not wish to proclaim our presence by the report of fire-arms.

We were paddling with six rowers along this desolate river, bordered upon either side by lofty papyrus and sombre forests, when we observed a small island, a portion of the area being overgrown with the very graceful but mournful-looking rush (papyrus); this had taken root in a shallow soil

formed by rotten vegetation, which had drifted upon the hard granite that formed the basis of the isle. The bare gray granite shelved gradually towards the water, and exposed a clear surface of about 60 feet; upon this were large rounded masses resembling boulders of rock, which had resisted the process of gradual disintegration. It was a picturesque and unexpected island, a huge rock rising suddenly from the deep water.

The canoe drew near, and when within about 20 yards the great boulders of granite began to move! I could not believe my eyes; great masses commenced to unfold, and in a few seconds resolved themselves into two vast forms, each as thick as the body of a hippopotamus, and of enormous length. These two antediluvian monsters glided slowly and fearlessly along the gently sloping granite, and when half beneath the water they exposed a breadth of back which was the most extraordinary sight I have ever seen in my long experience of crocodiles.

We stopped the canoe for a few moments, but I would not fire for the reason already given, and after gazing at us for a short time, the great heads sank below the surface; the scene was then restricted to a rather flat granite island, without any boulders, and a dense tuft of papyrus rushes on the western side.

I would not presume to estimate the length of these extraordinary creatures, but the deep and broad river, flowing silently through one of the oldest portions of the earth, suggested, by the

exhibition of these mighty forms, that no change in the inhabitants of the stream had taken place since the original creation.

Crocodiles, like all other creatures, vary in their characters according to the conditions under which they exist. Although they prey upon any living thing that comes within their reach, they, as inhabitants of the water, are by nature fish-eaters. When cutting wearily during two seasons through the dense obstructions of aquatic vegetation which had closed the navigation of the White Nile, we occasionally entered upon horrible solitudes of shallow swamp, peopled by countless snakes; the air, sultry and redolent of malaria, was humming with mosquitoes; and in this chaos, if a few square yards of sandbank appeared above the marsh, there were the belly scales of some large crocodile printed upon the surface. Nothing could be more horrible than such associations: the loud .hoarse snorts of the hippopotamus at night, and the reptiles that were present in the daylight; these formed a combination which conveyed an indelible impression of antediluvian realities. This was the natural position of the crocodile, in which fish must have constituted its nourishment.

I remember upon one occasion, in the Albert Nyanza, we found one half of a fish (*Perca Nilotica*) that was bitten as clean through as though divided by a knife; this was the work of a snap from the jaws of a crocodile. The fish would have weighed about 70 lbs. when whole.

It was almost certain that the fish caught nightly in our trammel-nets would be taken by crocodiles; and, not content with an endeavour to abstract them, they tore the net into large holes with teeth and claws, in their determination to possess them.

The most dangerous time for a man to enter a river is just before or after sunset, as the fish invariably visit the shallows during evening; the crocodiles follow them, and they may frequently be seen at that hour dashing like huge pike most furiously at the larger varieties, which sometimes jump to a great height out of the water, in an attempt to evade their pursuers.

When I was in command of the Khedive's expedition, our losses through crocodiles were very distressing, all of which were terrible examples of the ferocity, combined with cunning, which characterises this useless scourge. On one occasion the vessels were sailing up the White Nile with a strong north wind, making at least 7 knots an hour; one of the cavasses was sitting upon the deck, with his legs dangling over the sides of the deeply laden vessel, his feet being half a yard above the water. Suddenly a rush was made by a very large crocodile, and the man was seized and carried off in a shorter time than it would take to announce the fact. This was done in the presence of a hundred men on board the vessel, and nothing was ever heard of the unfortunate cavass.

On another occasion one of the sailors was sitting

upon the rudder to wash himself; the vessel was in motion, but he was carried off by a crocodile in sight of his comrades on the deck.

These attacks prove that the fact of a vessel travelling through the water does not in all cases terrify this horrible reptile, but, on the contrary, it snatches its prey from the vessel itself while in movement.

I lost so many men by these creatures that I made a point of shooting every crocodile that showed its head above the surface, or that was basking upon the shore. The rifle that I invariably carried was a ·577 of extreme precision, and I slaughtered a vast number of these vermin in revenge for their misdeeds.

On one occasion I killed a crocodile which, although not longer than 12 feet 3 inches, was very thick in the body; this was proved to be a male-factor by the testimony of two bracelets and a necklace, belonging to a missing girl, which we found within its stomach.

Upon opening the stomach and examining the contents we discovered upwards of five pounds weight of gravel or pebbles, mixed with a woolly substance and aquatic weeds. The wool was the hair of the girl, and her ornaments were discovered among the gravel.

The necklace was made of small pieces of wood threaded upon a string; these wooden beads were partially abraded by the action of the pebbles, which no doubt are swallowed for the purpose of assisting

digestion, as fowls and other birds swallow sand and stones for the same object. Nearly every crocodile that I have examined contained a certain amount of coarse gravel within its stomach. This has a peculiar power of contraction and expansion, capable of sustaining great privation when food is scarce, and of accommodating itself to any amount of sudden plenty.

Among the accidents that occurred to my expedition, one man had his arm bitten off at the elbow, being seized while collecting aquatic vegetables from the bank. He was saved from utter loss by his comrades, who held him while his arm was in the jaws of the crocodile. The man was brought to me in dreadful agony, and the stump was immediately amputated above the fracture. Another man was seized by the leg while assisting to push a vessel off a sandbank; he also was saved by a crowd of soldiers who were with him, engaged in the same work: this man lost his leg.

The captain of No. 10 tug was drowned in the dock vacated by the 108 ton steamer, which had been floated into the river by a small canal cut from the basin for that purpose. This channel was about 30 yards in length, and 3 feet in depth. No person ever suspected that a crocodile would take possession of the dock, and it was considered as the safest place for the troops to bathe.

One evening at muster the captain was absent, and, as it was known that a short time previously he had gone down to wash at the basin, he was

searched for at the place. A pile of clothes and his red fez were upon the bank; but no person was visible. A number of men jumped into the water, and felt the bottom in every portion of the dock, with the result that in a few minutes his body was discovered; one leg was broken in several places, being severely mangled by the numerous teeth of a crocodile. There can be little doubt that the creature, having drowned its victim, had intended to return.

This must have been a peculiarly wily monster to intrude into a place which was so continually disturbed. We could never discover any crocodile in the immediate neighbourhood upon which we could cast a suspicion as the depredator. Some months after this incident, a terrible calamity in the canal was adjudged to have been occasioned by the same crocodile, although no actual proof could be adduced.

About 7 P.M., Lady Baker and myself, together with Commander Julian Baker, R.N., were sitting in an open shed in the comparative cool of evening, when a man rushed past the sentries, and threw himself upon the ground, clasping my legs in an agony of terrified excitement. The sentries immediately rushed forward, and seized him by the back of the neck. Releasing him instantly by my order, the man gasped out, "Saïd, Saïd is gone! taken away from my side by a crocodile, now, this minute!"—"Saïd! what Saïd?" I asked: "there are many Saïds."—"Saïd of the No. 10 steamer,

the man you liked; he is gone; we were wading together across the canal by the dock where Reis Mahomet was killed; the water is only waist deep, but a tremendous crocodile rushed like a steamboat from the river, seized Saïd by the waist, and disappeared. He's dragged into the river, and I've run here to tell you the bad news."

We immediately hurried to the spot. The surface of the river was calm, and unruffled in the stillness of a fine night. The canal was quiet, and appeared as though it had never been disturbed. The man who had lost his companion sat down, and sobbed aloud. Saïd, who was one of my best men, was indeed gone for ever.

There were many accidents among the natives, which may easily be imagined, as they were continually in the habit of swimming across the river when accompanying their herds of cattle. Upon these occasions the crocodiles usually extorted a toll, and sometimes they took a proprietor instead of being satisfied with a cow.

A curious incident occurred, which thoroughly exemplified "the biter bit," and I should imagine that such an event has very rarely taken place.

I had three large cows with exceedingly long horns, which I had brought from the Bôr tribe to Gondokoro. These were totally different from the small and active cattle of the Bari, and they were regarded with great admiration by the natives. When I was about to leave for the interior, I confided these valuable animals to the especial care of a

neighbouring chief, who was to make use of the milk, but to be responsible for the safety of the cows.

Upon my return, two years after, the chief appeared, and, in reply to my question, he declared that the cows were all well, and that one of them was regarded with veneration by all his people. Every morning fresh flowers were garlanded around her horns, and she had become the sheik of all the herds, because she had accomplished a feat which had never been performed by any other animal. *She had caught a crocodile !*

This proved to be correct. She had gone to the river to drink, in a place where the bank shelved very gradually towards the water. As she was drinking, a large crocodile seized her by the nose, and in the usual manner attempted to drag her into its own element. Instead of this, the bank being favourable, the heavy and powerful cow commenced the game of "tug-of-war," and as the crocodile maintained its hold, the cow, instead of being dragged in, succeeded in dragging the attacking party out. Nothing would induce the tenacious monster to let go; therefore by degrees, whilst struggling, both the cow and crocodile retreated many yards from the river's margin. The natives were attracted by the bellowing of the cow, and seeing the position, they at once rushed to the rescue, and mobbed the crocodile with their spears. They had kept the head as a trophy; and the cow was regarded as a heroine.

I was a spectator upon one occasion when a very large crocodile seized a bullock and pulled it into deep water; several times the animal in its struggles could be seen upon the surface, although the head was held beneath by the steady grasp of the captor: at length all disappeared except the tail of the ox, which twisted and writhed convulsively in the air like a wounded snake. In about two minutes it ceased to move, and the entire body floated, drowned, while the long head of the triumphant crocodile rose alongside, and quietly contemplated its victim.

There can be no doubt that crocodiles can see beneath the water to a considerable distance, should it be clear; on the other hand, they rarely discover their prey in this manner, but, perhaps unseen, the reptile's projecting eyes are just above the surface at some little distance, and it sees an animal upon the bank, so near the margin that it can easily be surprised. The crocodile then sinks, and approaches beneath the water, until it ventures upon another stealthy peep from a closer distance. When certain of the position it sinks again, and swimming until within reach of the unsuspicious object, it makes a sudden rush with extraordinary velocity, and generally succeeds in snapping its prey within those merciless jaws from which there is no escape.

It is always dangerous either to sit or stand upon the extreme edge of a precipitous bank, unless many feet above a river. Should a crocodile be unable

to reach an object with its jaws, it will frequently strike with the tail so suddenly that the animal or person is tripped up, and knocked into the water, to be instantly seized by the teeth and carried off. I have watched upon many occasions the stealthy advance of a crocodile to capture small birds, when in flights of many thousands they have settled upon the yielding branches of dwarf willows overhanging the Atbara river. The elastic boughs bent down beneath the weight of the innumerable flock, and the crocodile's head appeared above the surface at a distance, sank below, and quickly reappeared (the eyes and crown alone above the water) within 10 yards of the unsuspecting birds, all of which were busily engaged in twittering excitement, quarrelling for places, and occasionally dipping their beaks in the water when the bending twigs permitted them to drink. In a few moments after the disappearance of the wary eyes, a tremendous splash was accompanied by a pair of open jaws, which swept the occupants of the lower branches into the greedy throat. This artful attack was frequently repeated, and generally with success.

The Soudanese Arabs eat the flesh of crocodiles, therefore a professional hunter can earn his living by the value of various portions of the reptile, in addition to the musk. The skin is soaked until it becomes soft: it is then cut into long, thin strips, to be used for lashing any wood-work that may be fractured. No animal's hide is so hard as that of the crocodile when treated in this manner, and a good

supply is invaluable to an expedition, where repairs are necessary almost daily. The contraction of the wet hide during the process of drying is sufficient to draw together the split stock of a gun, and render it stronger than the original.

I have seen wheels of field-guns, the spokes of which had become loosened by the dry climate and exposure to the sun, rendered tighter than when new, by interlacing them with raw crocodile's hide, well soaked for two or three days; these were dried in the shade gradually, and they resembled a cobweb in appearance, but were as hard as horn.

The difference of taste is unaccountable; the natives of Central Africa refuse the flesh of a crocodile, although they will eat stinking fish. The Arabs eat the crocodile, but are most particular that fish should be free from taint.

The eggs of crocodiles are like those of the goose, both in size and shape. The female scrapes a hole in the sand, and lays from fifty to a hundred, which she carefully buries. The young, when hatched, find their way to the river, and are no longer an object of maternal care.

I have never eaten the eggs, but they are much prized by some tribes, although rejected by others. The natives of the Garo Hills, in the neighbourhood of the Brahmaputra river, collect a harvest of these ova during the season when the river has forsaken the high shore, and the sandbanks are raised above the level. It is a simple matter to discover the

nest, as the claw-marks and the heavy trail of the crocodile are distinct upon the sandy soil.

Crocodiles may be easily captured in nets, and I am surprised that so little attention is bestowed upon their destruction, now that the skin has a marketable value. When shooting these creatures the hunter should be provided with a single-barbed harpoon only half an inch in width, with an extremely sharp point. This should be made of the best steel, and should be fitted upon a bamboo, or some other light but strong pole, about 25 feet in length. A rope should be fixed to the harpoon, and secured to the centre of the pole. When a crocodile is shot, it sinks to the bottom; it must therefore be sought from a canoe, and when felt by the harpoon, it can be speared.

CHAPTER XIV

THE BUFFALO (*BUBALUS*)

THE genus Bos is the most useful to mankind. The bull has been from time immemorial venerated as an emblem of procreative power. The winged bulls of Nineveh are now stored in that grand asylum of the ancient world, the British Museum; and we look back to the earliest history in Egypt, where we see the bull-calf Apis sacred, as symbolical of strength and procreativeness, that should supply mankind with the herds of cattle necessary for their existence.

The veneration for the bull was so firmly implanted in the human mind, that we read of the first symptoms of antagonism to the teaching of Moses, in Exodus, when the Hebrews sought the assistance of Aaron to mould them a bull-calf in imitation of the Egyptian Apis, directly that their leader and deliverer had disappeared for a few days to seek the counsel of the Lord upon Mount Sinai.

In the savage regions of Central Africa, where the worship of a Deity is unknown, the bull is regarded

with a respect that is not bestowed upon any other animal. Vast strength, the perfection of masculine vigour, and indomitable courage, form the combination which has attracted the adoration of mankind.

This genus Bos is distributed in immense variety throughout the globe, but in Africa we find an extraordinary anomaly, that although domestic cattle (the generally accepted Bos) are omnipresent, even among those savages who have been until recent years entirely excluded from the world's history, there is no such creature existing in its wild state, and we are at a loss to discover a progenitor. We know three varieties upon the African continent, but these belong specially to the *Bubalus*, and are distinct from the ordinary wild cattle (*B. taurus*) of Europe or other countries.

The African buffalo, or *Bos Caffer*, has two varieties, in which the distinction is only to be found in the horns. No. 1 are convex, and meet at the base across the forehead. No. 2 has flat-fronted horns, very broad, but they do not actually unite across the front of the skull.

There is also a species which is quite distinct; this is the *Bos brachyceros*, or short-horned buffalo. This is found upon the West Coast of Africa, and is very beautiful. It is a fawn colour, with a tinge of dark chestnut, and about the size of a Jersey bull. The ears are long, and are tipped with a long tuft of hair; the eyes are large, the head remarkably small, and delicately shaped: the horns are about 12 inches long, broad at the base, without

much curve, and sharp at the points. The hair of the body is short and smooth, like an English cow in summer condition, and the dewlap is soft and large. The tail is long, with a black tuft of hair at the extremity.

Like all the Bos tribe, the bull is savage when provoked. My nephew, Commander Julian A. Baker, R.N., nearly lost his life in an encounter with one of these animals. He was at that time in command of the *Foam* on the West Coast of Africa, and he had landed at some convenient spot, from which he strolled inland, accompanied by a faithful Kruman as a shikari: this man carried a spare rifle. They had not gone far when he observed a bull grazing in a narrow glade, and upon firing within 100 yards, the animal fell, and blundered into a small bush. Being rather excited with the novelty of a strange species, he ran up to the place where the bull had fallen; but no sooner had he reached the spot than the beast that he had supposed to be dead, or dying, charged furiously at him from the impervious cover which had sheltered it. His rifle missed fire, and in another moment the bull thrust one horn into his thigh, and lifted him off the ground. He was in this manner thrown upwards, and found himself fixed securely upon the animal's head. Fortunately he was well practised at acrobatic feats, and in this dilemma he managed to hold on to one horn, and to disengage his perforated thigh from the other, falling to the ground the instant that his leg was released; but he never relaxed his hold of the

right horn. He was now upon his back, with the infuriated bull attempting to gore him as he lay, but with great presence of mind he remembered the plan used in Africa for throwing oxen; and bringing his full weight to bear, by pulling with his right hand upon the animal's left horn, he twisted the nose with his left hand upwards in a contrary direction, thus exerting the greatest leverage upon the neck. In this manner he was able to prevent the horns from entering his chest, and, knowing that the bull was shot through the shoulder, he trusted that it could not survive a sufficient time to complete his destruction. In the meantime, his faithful Kruman shikari had rushed to his aid, and, fearing to shoot lest he might wound his master, he fired both barrels right and left in the air, close to the ear of the assailant, in the hope that it would be frightened by the sound. This had not the slightest effect. Throwing away his useless rifle, he drew a long and extremely sharp hunting-knife, and seizing the bull by the soft and pendulous dewlap, he held it tight, and with one desperate drawing cut across the throat he reached the spine. As the blood rushed from the severed arteries the bull fell struggling upon the ground, and when, after considerable delay, assistance was obtained, Julian Baker was carried to his ship, where for nearly three months he was laid upon his back, with a vivid recollection of his first interview with the "*Bos brachyceros.*" The head of that animal, carefully prepared by Mr. Rowland Ward, the well-known naturalist of Piccadilly, is now

among my collection. It is very small, and delicately shaped, differing entirely from all other varieties of the buffalo, and exhibiting its connection with that species only by the peculiar shape and texture of the horns. If such a struggle had taken place with an ordinary buffalo, the strongest man would have been killed almost instantaneously, without the chance of escape.

The *Bos Caffer* is about the same in size and shape as the Indian variety, but differs in the shape of the head and the formation of the horns. All the Bos tribe are more or less savage, but the African buffalo is a peculiarly ferocious brute, especially when wounded.

All buffaloes delight in swampy plains, where they can obtain rich pasturage of the coarsest description, that would not be eaten by ordinary cattle; they love to wallow in the mud during the mid-day sun, and to lie in shallow pools with only their heads above the surface of the water. A buffalo appears to have only just escaped the classification of amphibious. The love of water becomes an actual necessity, as the buffalo, although so useful as a beast of burden, or for draught purposes, requires a rest during the hottest hours of a tropical day, to enable it to bathe, and roll itself in the dearly beloved mud; without which it would refuse to work, and would ultimately lose condition.

The buffaloes of Italy and Egypt retain the original type of their oriental race, but they have dwindled in size, and have lost both length and

weight of horns. There cannot be a better example of a theory than this animal, as it has been domesticated for so great a length of time that we are enabled to observe the peculiar changes effected by local peculiarities. This proves that various conditions of localities produce special results in the development and character of animals.

The buffaloes of Ceylon are the same as those of India, but the horns are very inferior. The horns of all animals in Ceylon are comparatively small, as there is a deficiency of the necessary ingredients in the pasturage for their production ; we therefore see elephants without tusks, and both deer and buffaloes with horns far smaller than those of India belonging to the same species.

In Ceylon the so-called domestic buffaloes are extremely vicious. In Egypt and Italy they are the reverse, and children are seen mounted upon their backs or driving them to pasture. In China they are equally good-tempered.

The horns of the Indian buffalo are enormous, and, when measured in the curve from tip to tip, they have been frequently known to exceed 12 feet.

Like all other wild animals, the buffaloes of India are much reduced in numbers. The modern breech-loaders, with increased facilities for communication, which enable Europeans to penetrate without much difficulty to their haunts, threaten to exterminate everything which has been attractive to the hunter, and in another twenty years the game will have disappeared.

I have myself witnessed the distressing change in many localities, which, when I was young, were teeming with wild buffaloes and other animals. People will now hardly credit the fact of their existence. My earliest introduction to the buffalo was at Minneria in Ceylon, 1845; such a creature is now unknown, as the few that remain have left the open plain, and betaken themselves to distant jungles.

There was no road to Minneria from 1845 to 1849 except an overgrown footpath for 22 miles from Narlandé, which had to be specially cleared at the traveller's cost when he ventured upon the journey. I can never forget the impressions of my first visit; we had been cutting our way through jungle in a long day's march, assisted by a number of Singhalese with their sharp bill-hooks (*catties*), and, oppressed with the sultry heat of the dense bush, we were at length overjoyed when we suddenly emerged upon the beautiful green plain. The grass was about 6 inches high, and the plain, which was irregular in shape, extended for a great distance. I cannot improve upon the description which I gave of this spot in the *Rifle and Hound in Ceylon*, published many years ago:—

"At 4 P.M., and 80 miles from Kandy, we emerged from the jungle, and the view of Minneria lake burst upon us, fully repaying us for our day's march. It was a lovely afternoon. The waters of the lake, which is 20 miles in circumference, were burnished by the setting sun. The sur-

rounding plains were as green as an English meadow, and beautiful forest trees bordered the extreme boundaries of the plains like giant warders of the adjoining jungle. Long promontories, densely wooded, stretched far into the waters of the lake, forming sheltered nooks and bays teeming with wild-fowl. The deer browsed in herds on the wide extent of plain, or lay beneath the shade of the spreading branches. Every feature of lovely scenery was here presented. In some spots groves of trees grew to the very water's edge; in others the wide plains, free from a single stem or bush, stretched for miles along the edge of the lake; thickly wooded hills bordered the extreme end of its waters, and distant blue mountains mingled their dim summits with the clouds. . . . The grass was most verdant, about the height of a field fit for the scythe in England, but not so thick. From this the snipe rose at every 20 or 30 paces, although the ground was perfectly dry. Crossing a large meadow, and skirting the banks of the lake, from which the ducks and teal rose in large flocks, we entered a long neck of jungle which stretched far into the lake. This was not more than 200 paces in width, and we soon emerged upon an extensive plain bordered by fine forests, the waters of the lake stretching far away upon our left, like a sheet of gold. A few large rocks rose above the surface near the shore; these were covered with various kinds of wild-

fowl. The principal tenants of the plain were wild buffaloes.

"A herd of about a hundred were lying in a swampy hollow about a quarter of a mile from us. Several single bulls were dotted about the green surface of the level plain, and on the opposite shores of the lake were many dark patches undistinguishable in the distance; these were in reality herds of buffaloes. There was not a sound in the wide expanse before us, except the harsh cry of the water-fowl that our presence had already disturbed. . . . Not a breath of air moved the leaves which shadowed us, and the whole scene was that of undisturbed nature. The sun had now sunk low upon the horizon, and the air was comparatively cool. The multitude of buffaloes enchanted us, and with our two light double-barrels we advanced to the attack of the herd before us."

I have extracted this passage as a picture of the hunter's paradise, which I so well remember, but which now exists as a scene still lovely, but almost devoid of game.

In those days the buffaloes were quite unsophisticated, as they were never disturbed; the plain was their territory. I will not repeat what has already been published in the *Rifle and Hound in Ceylon*, but that first interview with the buffaloes, when we (my late brother and I) "advanced to attack the herd before us," very nearly wound up my early experience of shikar.

The "two light double-barrels" were quite

inadequate to the power required, but from that date I invariably used my heavy rifles, which arrived on the following morning, and the 3-oz., with 12 and sometimes 16 drams of powder, proved irresistible.

The Indian buffalo, although savage, is not so dangerous as that of Ceylon. The horns are immensely superior to the Ceylon species, but they are not so handy; and, as the hunter is generally mounted upon an elephant, he is tolerably secure, while in Ceylon he would be forced to advance to the attack on foot.

There is extreme danger in this sport unless the hunter is a cool and accurate shot, armed with a rifle of heavy calibre. The hide of a buffalo is intensely tough, and of great thickness; it is almost free from hair, and resembles the bare appearance of india-rubber. The frontal bone is thick, and although easily penetrated by an ordinary bullet with a large charge of powder, it is difficult to hit, as the animal, when facing an antagonist, carries its nose thrown upwards. The nose, therefore, should be the point of aim, as a bullet well directed will by this route reach the brain. It may be readily understood that when a vicious animal is your *vis-à-vis* the duel has commenced, and your shot must be delivered as a "settler." If you miss, or if the shot be uncertain in its effect, the buffalo will in most instances charge.

The charge of a buffalo is a very serious

matter; many animals charge when infuriated, but they can generally be turned by the stunning effect of a rifle shot, even though they may not be mortally wounded; but a buffalo is a devil incarnate when it has once decided upon the offensive. Nothing will then turn it; it must be actually stopped by death, sudden and instantaneous, as nothing else *will* stop it.

If not killed, it will assuredly destroy its adversary. There is no creature in existence that is so determined to stamp out the life of its opponents, and the intensity of fury is unsurpassed when a wounded bull buffalo rushes forward upon the last desperate charge. Should it succeed in overthrowing its antagonist, it will not only gore the body with its horns, but it will endeavour to tear it to pieces, and will kneel upon the lifeless form, and stamp it with its hoofs until the mutilated remains are disfigured beyond all recognition.

I have killed some hundreds of these animals, and I never regret their destruction, as they are naturally vicious and most dangerous brutes, whose ferocity is totally uncalled for. The *Bos Caffer* and the ordinary buffalo of Ceylon are about equal in pugnacity, and the duels between the bulls are a magnificent display of taurine strength and determination.

In such trials of strength the vanquished party generally retreats at full speed, followed for a certain distance by its adversary, who endeavours

to drive its horns into the posterior. This is a difficulty, as the great curvature of the horns renders a direct thrust impossible. The victorious bull, left upon the field of battle, has kindled the fire of fight, and longs to seek some new antagonist more worthy of its strength. It does not much signify at that moment of excitement whether it be man or beast, but if the former, it is to be hoped that he is well prepared.

I have frequently witnessed such battles between old bulls, and then walked up to interview the victor, with a 3-oz. rifle, upon the open plain. Nothing can be grander than the sight of a thoroughly excited bull who is determined to assume the offensive, provided that you have a double-barrelled No. 8 with 12 drams of powder, or the 3-oz. with 14 or 16 drams.

The terrific power of the old 3-oz. belted spherical bullet was frequently exhibited upon Minneria plain; and it was a grand experimental shooting-ground in those days, when buffaloes were within shot at all hours from sunrise to sunset. The 3-oz. was an absolute exterminator, and no buffalo had a chance, provided the rifle was held steadily and straight. This weapon was a single-barrel, and in those distant days it was of course a muzzle-loader, therefore I could not afford to miss, in the event of danger; I accordingly got into the habit of shooting straight, having a thorough confidence in the crushing power of the rifle.

Upon one occasion a single bull, which had evidently been fighting, as it showed the white scores of an adversary's horns upon its black hide, was venting its rage by pawing the green turf, and ploughing the soft ground with its angry head, when I dismounted from my pony, and advanced upon the open plain. Seeing me, it made hostile demonstrations, and marched slowly and determinedly forward, as though determined to settle the dispute at the closest quarters. When within 100 paces it stopped, and, after tearing up the ground most viciously for a few minutes, it started at full speed in as direct a charge as it could take; I met it in the chest with a bullet from the 3-oz. rifle, and the bull was killed so suddenly, that the momentum of its attack turned the body a complete somersault, and it lay motionless upon the ground, within about 30 yards of my position. The bullet had entered the chest, and, after passing through the heart and viscera, I found it beneath the skin of the hind-quarters, having completely raked the animal from stem to stern.

Upon two occasions, on the plain of Minneria, I killed two buffaloes with one bullet from the deadly 3-oz. rifle. There was a great commotion among a large herd of these animals, and upon my approach I discovered that a fight was going on between two very large bulls. When I drew near, the herd departed in full gallop, and left me alone with the two bulls, which were far too much engaged in their contest to regard my presence.

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I accordingly continued my approach until, when within about 50 yards, they condescended to observe me, and they at once resolved upon retreat; but their strongly curved horns were hooked together in their combat, and when attempting a departure, they pulled in vain to disengage themselves, ranging side by side in their efforts to effect a separation. Seeing the opportunity, I fired exactly through the shoulder of the nearest bull, and it dropped dead upon the spot, thus unlocking the horns and releasing its antagonist. This ran for a short distance, and then halting, it faced about, reeled to and fro for about a minute, with bloody foam issuing from its mouth, and rolled suddenly upon its side, dead.

The 3-oz. bullet, with 16 drams of powder, had smashed both shoulders of the first bull, and passed clean through the body; it had then entered behind the shoulder of the second bull, passed through the lungs, and was found just beneath the tough skin upon the opposite side, not much the worse for this extraordinary penetration.

On another occasion, as a herd was crossing me at full speed, I fired at the shoulder of a large bull, and dropped it on the spot; the herd continued at a gallop, but presently a cow lagged behind, and stopped; she reeled to the right and left, and fell dead, the bullet having passed completely through her, after having perforated the bull.

This large rifle was a wonderful performer,

and it would be endless to record the various examples of its power, but it may be instructive to give an account of an incident which will show by comparison the danger of small rifles in the pursuit of such hard-skinned beasts as buffaloes.

Mr. Frederick Dick, who was subsequently murdered at Negombo by a shot from a malefactor whom he, as Police Magistrate, attempted to capture, was shooting with me upon one occasion at my happy hunting-grounds, Minneria lake and plain; buffaloes were swarming. The 3-oz. was in the best of humours, and its performance led my friend Dick to imagine that buffaloes were, after all, not such resolute beasts as had been described. He was armed with a ridiculous single-barrelled rifle, No. 20 spherical ball. He had fired a number of shots from this toy uselessly, and I had killed the various buffaloes with the heavy weapon; I prevailed upon him to double his charge of powder. After some time, during which we had walked a considerable distance along the margin of the lake, we saw a solitary bull buffalo in a state of great excitement, on the opposite side of a small creek leading from the lake towards the jungle, about half a mile distant. As we drew nearer, the buffalo faced us, and tore up the turf with its horns, at the same time looking down the perpendicular bank, as though questioning the possibility of a descent. We now arrived at the creek; there could not have been a more favourable position for Dick's little rifle with a double charge

(about 3 drams), as the breadth of water which divided us from the opposite bank was not more than 30 yards. There was no danger, as the vertical bank, upon which the angry bull was standing in a menacing attitude, was at least 12 feet high, therefore it was impossible for the animal to cross over. I told Dick to be ready, and to aim at the back of the neck should the buffalo lower its head. To effect this, I threw a hard clod of earth across the creek; this splashed loudly in the water immediately beneath the buffalo's position. It looked down, and exposed its neck; at the exact moment Dick fired. The bull turned round convulsively, and fell upon its side. "Well done, Dick!" I exclaimed, "the double charge has done it;" and we hurried round the creek, wading through a shallow place as a short cut. Upon arrival at the spot, we found a mighty specimen of a bull buffalo; in the exact centre of the massive neck a minute hole, that was hardly perceptible, denoted the position of the tiny bullet which had overthrown this colossal animal. Dick stood in front of the bull's head, and revelled in the delight of his first buffalo, which he had killed by a neat shot from so insignificant a weapon.

"Never stand at the head of a buffalo, whether dead or alive," I exclaimed to my excited and delighted friend; "but always stand upon the side facing the back of the animal, well away from the legs, as I am standing now."

The words were hardly uttered when, to our

intense surprise, the apparently dead buffalo suddenly sprang to its feet, and blundered forward straight at the astonished Dick, who was not 3 feet distant. He attempted to jump backwards to avoid the horns, but the ground being full of ruts, he tripped, and fell upon his back, immediately in the path of the savage bull. Instinctively, as quick as lightning, my right hand had drawn my long hunting-knife and plunged it hilt-deep exactly behind the shoulder. To my amazement, the buffalo fell to the blow; and the kicking of all four legs, and the convulsive twitching of the tail, showed unmistakably that this time the mighty bull was beyond recovery.

I had jumped back upon the instant, to clear myself from the animal; Dick had only just recovered himself, and was staggering away, until I called him back. "He's dead enough this time," I shouted, as I showed him the long knife streaming with blood, which had paralysed so suddenly an attack which must have been fatal.

Our native attendants appeared stupefied; the whole affair, from the moment we had surveyed the apparently dead buffalo to its actual death, had not occupied one minute.

This was a very wonderful escape, and a most practical example of the teaching which I was giving when the resuscitation took place. The questions would naturally be asked—"What sort of a hunting-knife was this?" and "What was the

nature of the wound which effected such an instantaneous collapse?"

The knife was a portion of a real old "Andrea Ferrara" Highland claymore. The blade was 18 inches in length and 2 inches in breadth, double-edged, and as sharp as it was possible to make it. The point was as keen as a lancet; that is the condition in which a hunting-knife should always be kept. I never leave the camp for a day's work without first examining the edge and point of my knife; if necessary, I personally sharpen it upon a Turkey hone, and I never allow a servant to handle it.

We made a careful *post-mortem* examination of the buffalo. The small No. 20 spherical bullet had settled upon the spine at the back of the neck, but had not damaged the bone; the shock had stunned the animal for a few minutes. The sharp double edge of the long hunting-knife had completely divided the great artery of the heart, which was split open exactly at the orifice.

From that moment my companion declined to fire at buffaloes; I felt no hesitation in supporting his determination, as his weapon was totally inadequate to the work required.

Although it appears to have been a wanton destruction of life, I had no pangs of conscience in shooting these ferocious animals, as it would have been exceedingly dangerous in those days to have gone out snipe-shooting with an ordinary smooth-bore, while so many bulls were possessors of the

plain. The practice with the long 3-oz. rifle was most interesting, and afforded instructive experience in the penetration and stopping power of the heavy bullet. Upon one occasion I managed to separate a herd, and five buffaloes swam across a bend of the lake and reached a long but narrow spit of land which extended for several hundred yards into the water. Upon reaching the base of this narrow promontory I saw that the buffaloes would dispute the right of possession, and I advanced with extreme caution, the 3-oz. rifle in my hand, while a trustworthy native carried the long 2-oz. My people were so thoroughly confident in the power of these weapons that they had no fear of animals, which in ordinary circumstances they would certainly have avoided. We had not proceeded far when the buffaloes which were on the point ranged up together, and, without much demonstration, a large bull made a determined charge at full speed upon us, fortunately without being accompanied by his companions.

A shot from the 3-oz. met him exactly in the chest, and his momentum was so great that, being shot through the heart, he turned a complete somersault, and lay dead upon the muddy ground. This two-grooved rifle was easy to load, as the belt of the bullet was so prominent that it fitted at once into the broad and deep lines of the barrel. I had just placed the cap upon the nipple when, undismayed by the fate of the first buffalo, another bull charged, but not with the same velocity. This fellow was regularly crumpled up, and lay floundering

upon the ground, the bloody foam from the mouth proving the death-wound through the lungs. Reloading, I assumed the offensive, and I knocked over another, leaving only two from the original number. One of these now took to water, but received a bullet in the neck; the other made a rush as though wishing to charge past me to reach the plain; this one got the 2-oz. through the shoulder-blade at close quarters, and fell struggling in a confused heap, both shoulder-bones being smashed.

This was sharp work for two single-barrelled muzzle-loaders, but nothing could resist them. The effective power of such weapons induced me to order four double-barrelled No. 10 two-grooved muzzle-loaders, which proved to be exactly the weapons required for Ceylon shooting at that period, as they had nearly the same power as the 2-oz. rifle, with the additional advantage of the double-barrels.

As a rule, no person should attempt to shoot dangerous game with a single barrel, if on foot. Although the modern breechloader has simplified the system of loading, there are many cases when an accident might occur which would be obviated by the possession of a second barrel. I once had an unmistakable reminder, which I never forgot.

The heavy 3-oz. rifle had been so great an ally, that I regarded it as invincible. Instead of remaining satisfied, I attempted a fresh improvement, and I had a 4-oz. mould that produced a sharp-

pointed cone, instead of the original spherical but belted ball. In actual practice the rifle was not so powerful, as the shock upon impact was reduced by the pointed projectile, and was inferior to the larger surface of a hemisphere. The pointed bullet did not produce the same knock-down blow, and it was deflected from a direct course if it struck a bone.

I was loaded with this new bullet upon one occasion when a very large rogue elephant was grazing in a lake, and we resolved if possible to shoot it. The lake was several miles in circumference, and was, as usual, surrounded by open grass-land, backed by the thickest jungle. In one locality there was a patch of perhaps 2 or 3 acres of the densest thicket, growing partly in the water, and forming an isolated jungle separated only by about 100 yards of turf-like grass from the main body of the forest. If we could manage to place the guns behind some favourable bushes for concealment, close to the main jungle, and then drive the elephant into the isolated patch, it would probably march straight through, and expose itself to a steady shot at close quarters, from the hidden guns.

My brother was my companion, and having taken our places, we sent the men round to disturb the elephant, and to drive it, if possible, in our direction.

I was concealed behind a bush, only a few yards in front of the jungle behind me, and about 90 yards

from the isolated patch, into which we expected the elephant to be driven.

The beaters were thoroughly experienced, the wind was favourable, and in a short time the heavy splashing in the water warned us that the elephant had retreated from the lake into the clump of bush, exactly as we had expected. The beaters closed up, but nothing moved.

There was no doubt that the rogue was there, but the difficulty had commenced. Who was to drive it out? The soil was muddy, and the men could not move quickly, therefore they refused to venture within the thorny bush, where escape would have been impossible. I gave the men a gun, and ordered them to commence at the rear of the isolated patch, to fire several shots, to shout, and by these means to drive the elephant in the required direction.

This plan was adopted. We heard two or three shots, the beaters had ascended the trees, from which they were shouting like demons, and suddenly a magnificent rogue elephant, a gigantic bull, emerged from the jungle, and advanced majestically in direct line for my concealed position. It was a grand sight, and having thorough confidence in my rifle, I disdained concealment, and stood in front of my bush to meet him. The instant that the rogue discovered me, his demeanour changed; for a moment he halted, then swung his head to and fro, and without further introduction he charged full speed upon me. I awaited quietly, covering the

exact spot in the forehead, and fired. The smoke of the heavy charge of powder hung like cotton wool around me, and for a moment obscured the view; but feeling sure that he was down, I looked beneath, and to my horror I saw the trunk, the cocked ears and the expression of fury just above me.

To throw down my heavy rifle and to bolt upon one side was the work of half a second, but the elephant turned after me, and the race commenced over the most lovely piece of turf, like a well-kept lawn tennis ground. I could run in those days, and I flew along the level surface with this horrid brute behind me, going his best, and gaining in the race. Keeping parallel with the jungle, I hoped that the elephant would relinquish the pursuit and turn suddenly into the welcome covert; but no, he seemed determined to overtake me. This race lasted for about 100 yards, when I suddenly doubled to my left, which would necessitate a corresponding move upon the part of my pursuer, that would bring him into the crowd of beaters who were advancing from the isolated patch. At that moment the elephant turned to the right, and was lost in the thorny jungle; while I was breathless, and relieved from the exciting chase.

We never saw that elephant again, although we followed some distance upon his tracks in pursuit. My brother and my shikaris declared that the bullet had struck him exactly in the right place, but that his head was carried very high, and thrown back; the conical sharp-pointed bullet had

therefore deflected, instead of continuing a direct course.

I had another unsatisfactory experiment with an elephant, which determined me to have nothing more to do with this pointed projectile, and I returned to my old love, the 3-oz. belted spherical.

In those days we always used the finest grained powder, as we were afraid of a miss-fire with a muzzle-loading rifle, unless the grains could be distinctly seen in the nipple before we adjusted the cap. This strong and quick-burning powder produced a severe recoil, but the penetration was enormous. It is this power which is absolutely necessary when shooting buffaloes, rhinoceros, etc. If the animal charges, you have no chance of escape unless you possess a rifle that will rake it from end to end. When making a *post-mortem* examination of a bull buffalo that has been killed in this superior manner, the passage of the bullet through such dense masses of muscles and bone appears incredible. The depth of chest through the brisket from the front is at least 2 feet of solid matter, chiefly gristle and breast bones; that alone will stop an ordinary bullet; but a 2-oz. hardened spherical with 12 drams of powder will drive through the entire animal, and the ball will be discovered nestled beneath the hide somewhere below the tail. I have known a 3-oz. hardened conical bullet pass completely through an African bull elephant, from one shoulder to that opposite, from which it

escaped. These are the sort of tools for heavy game; and if the hunter is strong enough for his work, and is properly armed with double-barrels, there will be every chance in his favour, and he will not be included in the gloomy list of casualties that have befallen so many of his race, chiefly through the inferiority of their weapons.

I have killed elephants with a No. 16 spherical bullet (1 oz.), and African buffaloes and rhinoceros with a 24 bore (·577) and only 2½ drams of powder, in the old days of muzzle-loaders; but these were favourable shots in positions which afforded slight resistance. Such instances of success are exceptions to the rule, and I cannot too energetically impress my experience upon all beginners, that they must be especially armed with rifles that are of proportionate strength to the animal to be encountered.

Although the bull buffalo is generally more formidable than the female, the latter is even more determined to destroy her antagonist if in defence of her calf. I have already described, under the head of the "Tiger," the courage of the buffalo in attacking that formidable beast should it presume to invade the sanctity of the herd. There is no creature in existence so determined as the buffalo to fight to the last gasp, when once its combative spirit has been aroused.

There are very few persons who have had a really wide experience of buffaloes in the various countries which they inhabit, and the description

that I have given might appear somewhat superlative; but although many may be shot which offer no resistance, and fall unresistingly before the rifle, these are not to be depended upon as guides or examples. The hunter of buffaloes who follows the pursuit for years, will find that the true character of the animal is one of stubborn unflinching courage, and unmitigated revenge should it gain the ascendant.

During eight years' experience in Ceylon I was fortunate in escaping from any casualties among my followers, although very nearly caught myself; but in Africa I lost my best man, only through the fact of his being badly armed.

I shot a bull, late in the evening, upon the marshy border of the White Nile; this was knocked over, apparently dead, by the first bullet from a No. 10 rifle. My men actually danced in triumph upon its body, in the anticipation of a feast, after a long absence from fresh provisions during a voyage upon the desolate river. Instead of hamstringing the lifeless beast, they continued their insane gesticulations, when suddenly the buffalo jumped up, and sent them flying into the river, like so many frogs, swimming for their lives towards my diahbeeah. The buffalo disappeared in the swamp of high reeds and aquatic vegetation. On the following morning, supposing that the beast must have died during the night, about thirty or forty men, armed with double-barrelled smooth-bores, went ashore to look for the dead animal. They had not been ashore for many

minutes when I heard a shot, then another, followed by a regular volley. My people returned with the head of the buffalo and a large quantity of meat, but they also carried the body of my best man, who, when leading the way through the high reeds upon the traces of blood, actually stumbled over the buffalo lying in the swamp, and the light guns failed to stop its charge.

The crooked horn had hooked him beneath the ear, and penetrating completely through the neck, had torn out the throat, as though it had been cut. The savage beast had then knelt upon the body and stamped it into the muddy ground, until it fell dead before the united fire of thirty men.

I have never experienced any great difficulty with African buffaloes, for the best of reasons, that I have been extremely cautious, and have always shot with very powerful rifles. Baron Harnier, a Prussian, was the first unprofessional hunter to visit the White Nile as an independent traveller. He had his own vessel and two German servants, both of whom died of fever. Although he had great experience in buffalo-shooting, he was eventually killed by a large bull, which attacked his native servant after having received a death-wound from a single-barrelled rifle. Being unloaded, Baron Harnier attacked the buffalo with his clubbed rifle, in the hope of driving it away from his servant, who was lying upon the ground; instead of this, the bull turned upon its new assailant, and stamped and gored his body beyond recognition. His large gold

signet ring was found by the missionaries some yards from his remains, and the body of the buffalo was lying by his side, proving that the beast continued the savage assault until the wound proved mortal; vicious to the last gasp.

The celebrated sword-hunters of the Hamran Arabs excel in riding down the *Bos Caffer* and hamstringing it with a blow of the sharp sword while at full speed. I was with these people on one occasion, where the rocky hills were so much against the horses that they dared not venture sufficiently close to a large bull, which turned to bay upon a small plateau covered with boulders. The bull stood to bay for some minutes, but at length, as we tried the ruse of a feigned retreat, it turned and galloped down the hill. In an instant four horses clattered after it in renewed pursuit, and after a run of about five minutes over the most unfavourable ground, which precluded all attempts at closing with the game, the bull reached a narrow but impervious jungle. My artful allies now rode to the opposite side to windward, and having thereby given their wind to the hunted animal, they shouted, and threw stones into the jungle, in order, if possible, to drive the buffalo within sight of myself on the other side.

I presently heard something moving among the tangled branches, and being on a steady horse I rode to the extreme edge. I now saw the buffalo standing in the deep shade, broadside on, exposing the shoulder to a deadly shot. Taking the steadiest aim, exactly behind the shoulder-joint, with my

handy little 24 bore, and only 2½ drams of fine grained powder, I fired. The buffalo did not flinch, or respond in any way to the shot. I reloaded, but before the bullet was rammed completely home, the animal reeled to the right and left, and fell. It was dead, struck through the centre of the lungs, and the bullet was discovered in a rib upon the opposite side. Here was an instance where a large and powerful beast was killed by a single shot from an inferior weapon, but this was an exception, as such a chance seldom occurs of obtaining a quiet shot within 30 yards exactly at right angles with the shoulder. It will be seen from the description I have given from my own experience that the buffalo should be held in due respect, and that no unnecessary risks should be thoughtlessly encountered. Above all, do not follow a wounded bull into a thick jungle, or you will assuredly have trouble; it is a common trick for a badly wounded beast to turn from its direct course, and conceal itself in dense bush or high grass, from which it will rush unexpectedly, and charge your flank as you are following up the track of blood. If the forest is sufficiently open to enable you to see 30 or 50 yards ahead, there is no great danger, but thick and opaque bush will certainly lead to a mishap, that may be fatal. It must be well remembered that when a buffalo attacks, it never quits the body of its enemy until it has stamped out every sign of life.

AMERICAN BUFFALO—THE TRUE BISON. VOL. II. P. 75.

CHAPTER XV

AMERICAN BUFFALO (*BOS BISON AMERICANUS*)

THERE is no portion of the globe which exhibits the results of destruction more painfully than the prairies of North America. The Indians have given place to the extension of the white man's sway, and, as the wild tribes have diminished in proportion to the increase of European races, in like manner the wild animals either retreat to more distant solitudes, or cease to exist. The buffalo of America, which at one time blackened the plains with its countless herds, has now become a rarity, and in certain localities, where formerly the prairie grass was eaten close by thousands of these uncouth but interesting beasts, not a solitary specimen can be discovered.

The bison is a grand-looking creature, and in my opinion it is the most striking of all wild animals. There is a peculiar savagery in the aspect of a shaggy old bull in its winter coat, which surpasses in wildness of appearance all other species of game. Although in reality a bison, this animal is invariably termed the American buffalo. The bull is about

15½ to 16 hands at the shoulder, but this gives an erroneous idea of the proportions of the animal, as the shoulder is abnormally high, and from the withers, the back, instead of being straight, slopes towards the hind-quarters. These are disproportioned to the massive front of the animal, as they are very inferior to the fore-quarters. The tail is shorter than in any of the bovine tribe. The hoofs are small in proportion to the great size of the animal. The ponderous strength of this animal is exhibited in the head, neck, and fore-quarters; these are enormous. A shaggy mass of nearly black hair covers the head and almost conceals the eyes: this mane-like covering descends, and terminates in a long beard, which reaches to the knees. The horns, like all the bisons, are short and curved. In the winter months the coat is thickly furred with exceedingly close and curly hair, almost resembling a fine brown wool. The skins at that season are valuable as "buffalo robes," and have for a long time been in great request, but owing to the diminution in numbers of the animals, they are becoming exceedingly scarce.

Although the bison has a ferocious aspect, it is a perfectly harmless creature, and, unlike the buffalo of Africa and India, it would never offend unless previously attacked. Even then, it will escape if possible, but is furious when brought to bay.

The annual slaughter of these fine animals by the Indian tribes has been well described by Cattlin. These hunts took place at the commencement of

winter, when the hides were in prime condition, and the temperature was so low that the flesh could be prepared as pemmican.

The Indians, who were instinctively adepts at the pursuit of these splendid creatures, hunted them on horseback, until they managed to drive a vast herd into some favourable ground, where they could be surrounded by the tribe. The massacre then commenced, with arrow and lance, until none remained.

In the deep snow of winter, when the heavy bisons could scarcely plough their way through the unstable mass, and they struggled breast-deep along the drifts in search of some bare spot where the keen wind had exposed the scanty pasturage, the active Indians, shuffling in their snow-shoes upon the surface, could easily overtake and kill the tired buffaloes. This was a war of extermination, and the advent of the white man, with his usual talent for destruction, has nearly completed that which the wild Indian had begun.

I had heard much of this and other stories of the "buffalo." It was therefore a pleasurable surprise to find upon our arrival in the Big Horn range in 1881 that, although the plains had been deserted, there were many of these animals upon the mountains.

We had been toiling for some hours up the mountain face, at the base of which the Powder river flows, and upon arrival at the summit, our guide was obliged to confess that "he had never

been there before!" This was a perplexity, as the vast extent of mountain range was entirely trackless, and apparently devoid of water. Under such circumstances, although boiling with indignation, it is advisable not to express your sentiments, as such a policy will only add to the confusion of the guide. I therefore instructed him to cross a small valley, and to ascend the opposite hill, from which he would obtain a more extended view; he was to examine the whole landscape, and to report should he observe any appearance of water.

I rode with my wife across the same valley, but we ascended the range of hills upon our right, from which we could embrace an immense extent of country, and I immediately perceived a long green line, winding through the yellowish grass, between low hills, like a velvet ribbon. I knew this would represent a stream. Upon our left was a descent of 600 or 700 feet into a deep dell, at the bottom of which a similar green thread betokened water; this joined almost at right angles the original green line, after which the stream continued along a dark ravine, until lost in the thick forest of spruce firs, almost beneath the spot upon which we stood.

At the distance of about 1½ mile I could distinguish four black objects upon the face of a knoll to the right of the green ribbon, and upon an examination with my binoculars I discovered them to be four buffaloes lying down upon the yellow grass, about 50 yards to the right of the small stream. I immediately arranged that Lady Baker should take

the people, and camp below the forest on our left, while I should endeavour to stalk the buffaloes and procure some meat for our first dinner. There was high ground between the two green streaks, which formed almost a triangle from the apex of their junction, therefore the distance across the base, from the buffaloes to the camp, would not be above a mile.

We separated. Upon arrival at the bottom of the steep hill, I found the water, as I had expected, running in a clear stream only a few inches deep, between green rushes; following this for some little distance, I arrived at the junction, and I then ascended the larger stream. I was accompanied by my hunter, Jem Bourne, and we had sent our horses, together with the pack animals, to the proposed camping-spot. My long riding boots made walking most unpleasant, as the grassy slopes were slippery in the absence of nailed soles. By preference I waded up the shallow stream, until we considered that the animals were sufficiently near to detect the sound of splashing. We at length arrived at a mound which I had particularly remarked, owing to the presence of a large rock, which I had at first mistaken for some wild animal. I knew that the buffaloes, when we first saw them, were lying down upon the slope on the other side of this unmistakable position. Quitting the low bed of the stream, I now carefully ascended the steep slope, stooping low until I neared the summit. There was very little wind, but it was in our favour. Gradually, upon nearing

the top of the knoll, I raised myself; at the same moment there was a rushing sound of heavy feet, and the next instant I saw the four buffaloes going at full speed down the slope towards the small stream that we had just quitted. The nearest was about 60 yards from me, and with the ·577 rifle I aimed at the root of the tail. As the bullet struck within a couple of inches of the mark, this magnificent bull plunged heavily upon the ground. The three remaining buffaloes, all bulls, dashed through the shallow stream, and struggled up the opposing bank; this was so steep that they scrambled with the greatest difficulty, and no tame animal of that weight could have accomplished the ascent. I had immediately reloaded, and I took a lovely aim between the shoulders of each bull, as it exposed itself to a deadly shot, almost perpendicular, within 70 or 80 yards' distance; but I would not fire; I had them completely in my power, and that was sufficient. Buffaloes were being destroyed wholesale, and I would not join in the brutal list of destroyers.

In the meantime this grand bull was sitting paralysed, with the two hind legs stretched wide apart. It had attempted to move down hill after the first shock of the bullet, and had managed to slide itself for only a few feet forward by the action of the fore legs. It was now upon its knees, struggling to rise, but completely helpless in the hind-quarters. I called the attention of Jem Bourne to the effect of the ·577 solid bullet, and I told him to watch the result of a merciful quietus, exactly

through the shoulder-bone. The bull fell over upon its right side, and never moved.

I trust that I may not be considered hard-hearted in recounting such shots in detail, and their results; I do so in the scientific interests of rifle practice, to produce examples of the actual practical effects of certain weapons, used against particular animals. Had I been as I was in my younger days, without a life's experience, I could have shot thirty or forty of these splendid animals with ease; but from the moment of this first example I determined to kill no more, but only to admire. In accordance with this determination, I took great pains upon many occasions to obtain a shot, and after long stalks, having obtained a magnificent position, I raised my rifle, took a most deadly aim, and touched the trigger, having carefully kept the rifle upon half-cock. Away went the buffalo, to live for another day, instead of being slaughtered uselessly, to rot upon the plains, or to be devoured by wolves, or buried in the soil by bears. This sort of stalking afforded me much pleasure, but it did not suit my American attendant. "Well, if you came all the way from the Old Country to shoot, and you won't shoot when you've got the chance, you'd have done better to stop at home." This was the consolation I received for my self-denial when sparing buffaloes.

I did not mind these remarks; I had my own reward. The buffaloes on many occasions fed around our camp within 300 or 400 yards. We could watch them with the binoculars, and we enjoyed the study

of their ways with far greater pleasure than I should have felt in shooting them.

That big bull which I had extinguished was quite enough to prove all that I required; it was so heavy that, when Texas Bill arrived, our united efforts could not turn it upon its side.

There was nothing new in American bisons, unless it was the mercy shown to them on this occasion. That was a grand fellow; his mighty head is in my hall at this moment, stuffed and set up, as though alive, by that great artist Mr. Rowland Ward, who declared it to be the finest he had seen, huge, black, and shaggy, the dark colour of the head contrasting with the nut-brown of the neck and body.

It was an interesting *post-mortem* examination of this bull, and should ladies honour these pages with a perusal, they will of course pass over the descriptions which can so easily be avoided. The ·577 solid bullet, with a 6-dram charge of powder, had entered about 2 inches upon the left of the tail-root. This had passed through the pelvis, which was fractured, and had occasioned the paralysis of the hind legs. The bullet then perforated the intestines, passed through the paunch and lungs, and, having traversed the entire cavity of the body, it was found imbedded in the fleshy mass of the neck.

I can only ask those persons who patronise the hollow Express bullet—Where would that wretched projectile have been after striking such a bone as the pelvis of a bull bison? It would never have broken such a bone, but it would have smashed into a

hundred fragments, as though it had struck an iron target; there would have been an end to it; the buffalo would have gone on, not much the worse for the encounter.

It was very interesting to watch these bisons, as they almost daily appeared, either near the camp, or while I was out shooting. Frequently I saw them beneath me, when upon a cliff I was looking for big horns (mountain sheep); at other times I have come upon them suddenly, when they have jumped up from a lower terrace, as I descended the mountain side, but upon no occasion would I fire at them, as we always had plenty of venison in camp and I did not want them.

My fine young fellow Texas Bill was an expert hand at the lasso, and he captured a cow upon one occasion, but she was too strong for him to manage single-handed. I do not consider that the great difficulty consists in throwing the lasso, but rather in the management of the animal when entangled. The Mexican saddle has an upright pillar about 9 inches long in front; this is called "the horn," and one end of the lasso is secured by a round turn being taken when the animal is caught. It is manipulated entirely from this horn, as it can be slacked off, or drawn tighter, as the occasion may require; but there is considerable danger, as a powerful animal may dash away before the hand of the lasso-thrower is clear of the coil, in which case it might be caught between the loose coils and the wooden pillar or horn. While I was there, a man lost two fingers by

catching them in this manner, just as a buffalo jumped off, and the hard line cut them off like a knife, against the still harder horn.

The Americans show scant mercy to the buffalo, as they declare that it consumes as much grass as would fatten two bullocks; also, that the presence of many of these animals will attract the Indians. I do not credit either of these statements, as the buffaloes are not found upon the cattle ranches, but upon the mountains far beyond. They have long since been driven from the plains in the vicinity of man, and they have retired to higher altitudes, where they are comparatively undisturbed. The Indians are bound by law to remain upon their reservation grounds, and they would have no chance of following upon the tracks of buffaloes; it is merely an excuse for the destruction which is rapidly annihilating the wild animals of the once interesting "Far West."

I have adhered throughout my description to the local misnomer of "buffalo," but it must be borne in mind that the American species is the true bison.

In India there is the so-called Indian bison, but naturalists deny the right of this animal to such an appellation, and designate it as *Bos Gaurus*, commonly known in India as the gaur. Although I have been five times a visitor to our magnificent Indian Empire, I have never yet had an opportunity of shooting a gaur; the day may, I trust, arrive, as I hope to revisit the country next winter, and instead of returning home in the spring, I shall devote those months of

the driest season to the jungles, when it is far easier to discover the desired game.

As I have never experienced the gaur personally, I cannot enter into the details of its habits. It has decreased in numbers in the Central Provinces, not only from the annual destruction by the rifle, but from epidemics, to which all members of the bovine family are peculiarly liable. I remember about forty years ago, when in the northern portion of Ceylon, the stench was unbearable in certain places, where both wild and tame buffaloes had died in hundreds. A few years since, the district of Reipore was visited with a similar calamity, which destroyed the gaur in such numbers that some localities were left entirely deprived of these animals.

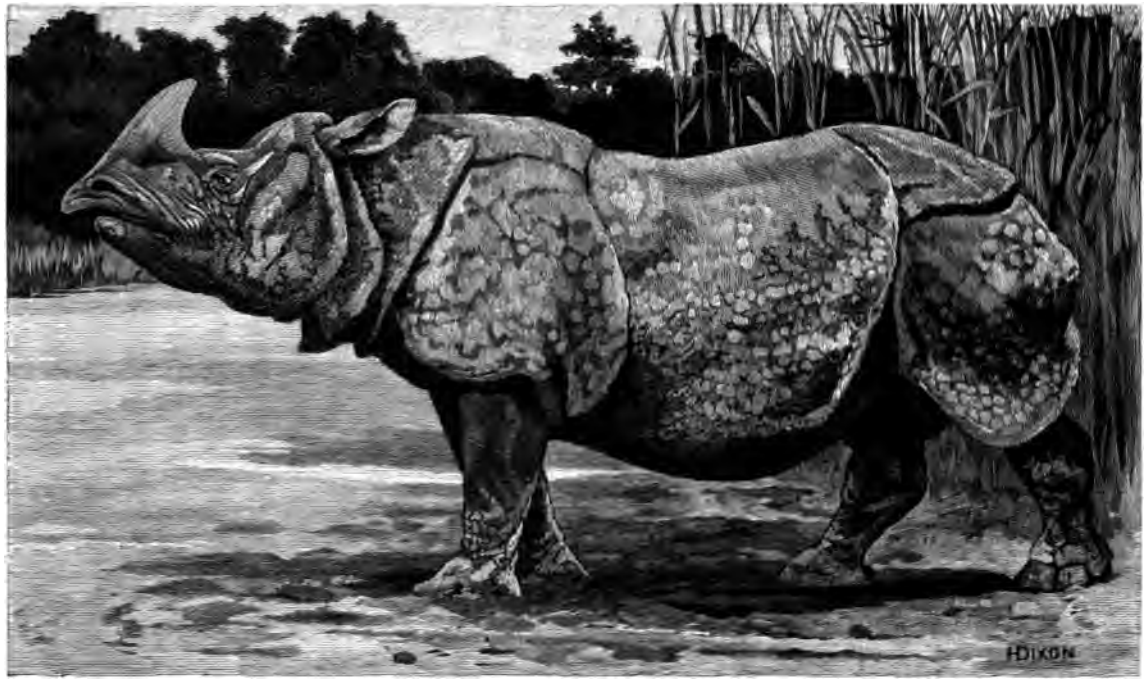
The gaur is supposed to be the largest of the Bos tribe, measuring 17 to 18 hands in the height of shoulder. The head is enormous, with a peculiar formation of the frontal bone, which projects above the cranium. A bullet must therefore be placed lower than it would be in an ordinary ox to reach the the brain.

This grand animal is generally to be found among hills that are covered with forest, in which the bamboo is plentiful, as the latter is the principal food of the gaur. In the winter months, when I have generally visited India, such jungles are so dense and green that they are almost impenetrable. At that season there is water in every channel, and torrent-beds at the foot of hilly ranges; therefore it is impossible to find the gaur, which is then upon the summits,

securely lodged in thick bamboo retreats. The yak is another species of which I have had no personal experience. This beautiful animal is a denizen of the most lofty mountains, and is found at elevations that could hardly be attained by any other animal of its weight. It is a most sure-footed beast, and is used for riding among the Himalayahs in its domesticated state.

There is a species of wild ox, or rather bison (*Bison bonassus*), still remaining in the forests of Lithuania; this was the original aurochs of Central Europe, which was at one time plentiful; but the increase of population and the invention of fire-arms drove these animals into the remotest forests, until by degrees they have been nearly exterminated.

It may be accepted as a fact that only two species of the true bison are known to exist, the *Bison Americanus* (or so-called buffalo) and the European species, *Bison bonassus*, both of which are distinct from all others belonging to the *Bovidæ*, in possessing fourteen pairs of ribs.



INDIAN RHINOCEROS. VOL. II. P. 87.

CHAPTER XVI

RHINOCEROS

THE "unicorn" of the ancients has been one of those animals that appear to defy the attacks of man. It is thus described by Cuvier:—"They are large animals, with each foot divided into three toes; and the nasal bones, very thick and united into a kind of arch, support a solid horn, which adheres to the skin, and is composed of a fibrous and horny substance, resembling agglutinated hairs. They are naturally stupid and ferocious; frequent marshy places; subsist upon herbage and the branches of trees; have a simple stomach, very long intestines, and a great cœcum.

"The Indian rhinoceros. (*Rh. Indicus*, Cuv.) In addition to its twenty grinders, this species has two stout incisive teeth in each jaw, together with two other intermediate smaller ones below, and two, still more diminutive, outside of its upper incisors. It has only one horn, and its skin is remarkable for the deep folds into which it is thrown behind, and across the shoulders, and before, and across the thighs.

"The Javanese rhinoceros (*Rh. Javanus*, Cuv.), with

the great incisors and single horn of the preceding, has fewer folds in the skin, though one of them on the neck is larger; and what is remarkable, the entire skin is covered with square angular tubercles.

"The Sumatran rhinoceros (*Rh. Sumatrensis*, Cuv.), with the same four great incisors of the foregoing, has no folds to the skin, which is besides hairy, and there is a second horn behind the first.

"The African rhinoceros (*Rh. Africanus*, Cuv.), or rather rhinoceroses, three species of them being now ascertained. Two horns as in the preceding; and no folds in the skin, nor any incisor teeth, the molars occupying nearly the whole length of the jaw. This deficiency of incisors might warrant a separation from the others. The great rhinoceros (*Rh. simus*, Burchell), which considerably exceeds in size any of the others, is further distinguished by its pale colour, its very long and straight anterior horn, and remarkably short hind one, and particularly by the form of its upper lip, which is not capable of elongation, and a certain degree of prehension, as in all the others; it is the most gregarious of any, and also the most inoffensive, frequenting the open karoos. The common Cape rhinoceros (*Rh. Africanus*, Cuv.) is darker, with also unequal horns, the posterior being shorter; and the Ketloa rhinoceros (*Rh. Ketloa*), recently discovered by Dr. Smith, is an animal of solitary habits, with horns of equal length, reputed to exceed the rest in ferocity."

I have extracted the definition assumed by

Cuvier to exhibit the peculiar varieties of this species. His *Rh. simus* is the white rhinoceros of Southern Africa. This does not exist north of the equator. The peculiar form of lip to which the great naturalist directs attention proves, being broad and rounded, that the animal is a grass-eater, in which it differs from those with prehensile lips, which feed upon the extreme ends of twigs and tender branches; to gather these, they require an embryo proboscis, which the prehensile lip actually represents, and the next stage of evolution may be seen in the development of the same member in the tapir. Cuvier omits to describe the peculiarity of the molars of the prehensile lip varieties; these teeth have sharp overlapping cutting edges, which, when the jaws are closed, exactly represent the action of a pair of shears. The prehensile lip catches a bunch of twigs, and forming them into a compact bundle, introduces it into the mouth; the shear-like teeth then cut it off as neatly as though pruned with a switching-hook.

There has been a great diversity of opinion concerning the varieties of rhinoceros, and I feel convinced that it cannot be solely determined by the length or shape of horns; these differ as much as the horns of stags, although the animals belong to the same species. The great white rhinoceros is a distinct species, which is marked by the blunt muzzle, the rounded and non-prehensile lip, the shape of the head, the enormous size, and the extraordinary length of the horn.

All the varieties of rhinoceros have the same peculiar formation of foot, confined to three horny toes, each of which forms nearly a half-circle. The horn of the Indian variety is so short as to be valueless as a trophy, and the length of 8 inches would be considered above the average, although the base is remarkably thick.

I do not agree with Dr. Smith that the horns of the Ketloa are of equal length. It is quite possible that some may be equal, where the anterior horn has been ground away by long service; but as a rule the anterior horn is considerably longer, and always different in shape, being rounded from its broad base, and continuing always round until it terminates in a sharp point.

The posterior horn is flattened at the sides, and rises with a sharp edge along the ridge, with a raised centre, which forms a point.

All rhinoceros horns are of the same texture, being simply agglutinated hairs, which, if cut in a thin transverse section and placed beneath a microscope, exhibit the capillary tubes glued together by a horny substance into a solid body. There is no material that can equal in toughness the horn of rhinoceros, and it has always been in request from time immemorial for various useful and other imaginary purposes. The belief that a cup formed of rhinoceros horn will detect poison is very common, and is thoroughly accepted by the Arabs of the Soudan. I have three in my possession, mounted in silver, which were

presented to me, when leaving Africa, by the great sheik of the deserts, Hussein Khalifa Pasha.

The horns are not attached to the skull, but they are merely seated upon the hard and thick bone, which forms a foundation, slightly convex, above the nose. The skin is immensely thick at the base from which the horn springs, and it appears bristly and rough, to a degree that would suggest gradual development into horn, which is actually the case.

When a rhinoceros has been killed, and the head has been exposed in the sun to dry, the horns will fall off upon the third day if struck lightly with a stick, and they will expose the foundation upon which they rested; this closely resembles the bottom of an artichoke when the prickly leaves have been removed.

Although the horns would appear unsuitable for rough work, being merely attachments to the skin, they are most powerful weapons of offence. It has been asserted that the rhinoceros will kill an elephant; this is highly probable, if it had an opportunity of striking it in the belly, or the flank by an unexpected attack; but no rhinoceros would have the remotest chance in actual conflict with an ordinary bull elephant, as the weight and strength would be immeasurably superior, in addition to the length and power of the two tusks. Elephants are much afraid of rhinoceros, but they are almost equally timid with other animals, while

the rhinoceros is a sullen, stupid brute that is afraid of nothing.

I have never seen more than one species of rhinoceros east of the White Nile, from Abyssinia to within 1° 14′ of the equator; this is the variety known as the Ketloa. It well merits the distinction of superior ferocity, as it will attack either man or beast, frequently without the slightest provocation. It is especially likely to attack should it obtain the wind (scent) of any person or strange animal before it appears in sight. This makes it extremely dangerous when riding through thick jungle or high grass, should a rhinoceros be somewhere concealed to leeward. I have myself been hunted out of the jungle by two rhinoceroses which thus gained our wind, just as we had become aware of their existence through the presence of fresh droppings. Fortunately there was no lady, and our party was confined to the Hamran Arabs and myself; but three sharp whiffs close at hand in the thick jungle, like jets of steam let off to ease the boiler, were immediately followed by the animals themselves, which came tearing down upon us at full speed, and sent us flying in all directions.

No lady upon a side saddle could possibly have ridden through that thorny jungle without being dragged from her seat. As it was, after a mad chase the animals lost sight of us, but when we collected together, everybody was more or less damaged, by either tumbling over rocks, or being torn by the hooked thorns.

THE BLACK RHINOCEROS (KEITLOA). VOL. II. P. 92.

The sure find for rhinoceros is in the neighbourhood of a peculiar red-barked mimosa. This is the much-loved food, and the appearance of the bushes will immediately denote the presence of the animal; they are clipped, as though by pruning shears, all the shoots being cut off in a straight line where the rhinoceros has been browsing. This neat operation is effected by the prehensile lip and the shear-like teeth. Another proof of rhinoceros will be found in the vast piles of dung, nearly always against the stem of a considerable tree; it is a peculiar custom of this animal to visit the same place every night, and this regularity of functions brings it into the traps which are cunningly devised by the natives for its capture.

A round hole, the size of an ordinary hat-box, is dug near the tree. This is neatly formed, and when completed, it is covered with a wooden circle like the toy wheel of a child's waggon. The spokes are made of flat bamboo, with sharp points overlapping each other in the centre, in the place where the nave would be. This looks rather like a sieve when fitted carefully as a cover to the hole. If any person were to thrust his fist through this elastic substance, the points of the bamboo would prevent his hand from being withdrawn, as they would retain his arm. In the same manner this sieve-like cap would retain the leg of an animal, should it tread upon the surface and pass through. Accordingly a noose is laid upon the surface. The rope is constructed specially, of great strength, and the end is

fastened to a log of wood that weighs about 200 or 300 lbs. This is buried slightly in the earth, together with the cord. A quantity of dung is thrown carelessly over the freshly turned ground to conceal the fact.

The rhinoceros, like many other animals, has a habit of scraping the ground with its fore foot when it visits the nightly rendezvous; during this action it is almost certain to step upon the concealed trap. The foot sinks through, and in the withdrawal the noose fixes itself upon the leg, prevented from slipping off by the pointed support beneath, which remains fast, adhering to the skin.

The moment that the rhinoceros discovers that its leg is noosed, it makes a sudden rush; this draws the noose tight, and, at the same time, the jerk pulls the buried log out of the trench. The animal, frightened at the mishap, gallops off, with the heavy log following behind. This arrangement is excellent, as it leaves an unmistakable trace of the retreat, which can easily be followed by the trappers on the following morning. At the same time, there is not the same risk of the rope breaking that would be occasioned by a steady pull. The log, which trails behind, catches in the innumerable bushes and thorns, causing great fatigue, until the rhinoceros, thoroughly wearied, is obliged to halt. When discovered by the hunters, it is generally entangled by some attempt to turn, which has hooked the log around a tree; the fight then commences, as the beast has to be killed with spears, which penetrate

FOLLOWING THE NOOSED RHINOCEROS. VOL. II. P. 94.

the hide with difficulty. Accidents frequently happen when the rhinoceros, thoroughly enraged, succeeds in snapping the rope.

I have seen a horn in Khartoum that was brought down the White Nile by one of the slave-hunting companies, which came from the distant west, in the latitude of Lake Chad; that must have belonged to a different species of rhinoceros, as it was quite 3 feet long, and immensely thick; no Ketloa or black rhinoceros ever possessed such a horn. The longest one I have ever shot measured 23 inches, and I have never seen a larger one in possession of the natives.

There was a ready market in Gellabat, the frontier town of Abyssinia, as in that country the horn is in great demand for the handles of swords belonging to the chiefs. In 1861 in that locality the ordinary price was a dollar per lb.

The skin of the rhinoceros is exceedingly compact and dense. When stretched over a block and dried, it is rubbed down with sand-paper, and oiled; it then becomes semi-transparent, like clouded amber, and is much esteemed by the great personages of Abyssinia for shields; these are beautifully mounted with silver, and are highly ornamental. I have a piece of skin tanned which measures 587 square inches and weighs 13¾ lbs. In its fresh state it would weigh more than double.

Although the Soudanese Arabs eat the flesh of this animal, it is refused by the savage tribes of the White Nile regions. These people say that the

Arabs are hyænas, who will eat anything, even crocodiles. The reason given by the blacks for their objection to the flesh of the rhinoceros is, that the blood is unlike that of any other animal; that should your hand be bloody, and you close your fist for a few moments, the fingers stick together, and you have a difficulty in opening them.

I have eaten young rhinoceros, and found it quite as good as a buffalo calf, but I imagine that anything young is tolerable. This was a curious incident. I was shooting, and exploring the affluents of the Nile from Abyssinia, and having examined the course of the Atbara and Settite rivers, I passed into the territory of Mek Nimmur, who was at war with the Egyptians. The first march from his camp brought us to the rivers Salaam and Angrab, at their junction; and I was following the course of the main river below this point, when we came upon the tracks of rhinoceros. Following upon these, I left the two camels behind, with the ropes, etc., which they always carried to secure any animals I might shoot.

We had not advanced far through the tolerably open jungle when we arrived at the foot of a rocky hill. There were many large boulders lying about, when suddenly one of my Arabs touched my arm and directed my attention to an object that appeared to be a rock; almost at the same moment a rhinoceros rose quickly from the ground, and had evidently obtained our wind. I made a good shot with a No. 10 rifle through the shoulder, and after

turning round twice, and uttering a peculiar squeaking sound like the bellows arrangement of a crying doll, it fell to the ground and died. We now observed a fine young animal which was standing upon the opposite side of the mother, and I suggested to my famous Hamran hunters that we should call up the camels and endeavour to secure the calf with our good supply of ropes.

This was quite opposed to their ideas, as the young one was sufficiently advanced to boast of a pair of small horns, which the Arabs declared to be too formidable to warrant an attempt at capture.

I thought otherwise, therefore I arranged that we should make a trial. The camels were brought, and the ropes arranged. Nooses were prepared, and I suggested that we should attempt to mob the young one, and then secure its legs.

My Arabs declined this plan, as they rightly declared that the ground was unfavourable, owing to the number of large rocks, which would prevent them from getting out of harm's way should the animal charge. It was ultimately arranged that Taher Noor, my head Arab, was to lend me his sword, and that I was to go first, while they would follow with the ropes and nooses, to endeavour to trip up the calf should it charge past me.

Taher Noor drew his sword. This was a beautiful blade, that had belonged to his family, and been handed from father to son for several generations; the cross hilt and fittings of the

handle were solid silver, also the knob at the end, through which the tongue was riveted. He cautioned me to beware of striking a stone, and he evidently parted with regret from his familiar weapon.

The calf was about 3½ feet high, and was standing by the body of its mother, evidently ignorant of her death. As I cautiously approached, it looked much larger than when I had seen it at a distance, and I began to think the Arabs were right in their conclusion. There was not much time for reflection, for the young tartar gave an angry shake of its ugly head, emitted the usual three sharp whiffs, and charged at me as fast as it could gallop.

I jumped quickly backwards, by a large rock, and it passed within 3 feet of me, but immediately halted, instead of continuing so far as the spot where the Arabs were in waiting with the ropes.

It now turned round, and seeing me, it repeated its charge in reverse, as hard as it could go. I again jumped back, but as I did so, I delivered a lightning-like downward cut with Taher Noor's favourite sword. The young rhinoceros fell stone-dead, all in a heap!

The Arabs ran to the spot. Taher Noor took the sword carefully from my hand, and pointing it at arm's length, he looked along the edge; he then wiped the blade upon the body of the rhinoceros, and, to prove the perfection of his weapon, he shaved a few hairs off his naked arm;

then exclaimed with a deep sigh of pleasure and astonishment, "*Mashallah*," and returned it to the scabbard.

We now carefully examined the young rhinoceros. Although only a calf, it was a large animal, and the neck was about 15 inches thick. The blade had fortunately struck exactly between two vertebræ, and had slipped through the gristle as though it had been a carrot. Continuing its course, it had severed the neck completely, leaving only the thick skin of the throat, to which the head was still attached.

This was a magnificent stroke, which delighted the sword-hunters, and I should much like to hear the story as it is now told by them, if alive, or by their descendants. They will assuredly have converted the calf into a full-grown rhinoceros, as the length of time now elapsed will have accounted for the change; but the incident will certainly be remembered, and narrated by the owner of the sword, and will be handed down to posterity with some few exaggerations.

We opened and cleaned the calf, and the united efforts of six men secured it across a camel; we then cut the shields off the large rhinoceros, and took the calf to camp, as Taher Noor wished particularly to exhibit the trophy of his sword to the Sit (Lady Baker).

As we arrived, we found a large body of Abyssinian hunters, who asked us for meat.

"Meat?" exclaimed my men. "We've left an entire rhinoceros only just skinned, about twenty minutes' walk from this. Look, you can see the vultures gathering in the air."

"Vultures? Yes, there are plenty of them; but if you took the skin off, there'll be no meat by the time we get there."

"Not if you stop here talking," my men replied. "Run, and you will be in time to get something."

About twenty fellows started off in the direction pointed out by the hovering birds. In less than an hour the Abyssinians returned, with a report "that only the skeleton remained upon their arrival."

There is no animal which parts with its hide so easily as the rhinoceros. Directly that the fatal shot has been fired, the Arab hunters measure the body by so many spans, the thumb stretched from the little finger. The rhinoceros should yield eight large squares of hide, each of which will produce a circular shield about 2 feet in diameter, or rather larger. When the operation of skinning is commenced, it is curious to see the want of attachment between the hide and the flesh; it detaches immediately, simply upon a few digs with the fist, and it flakes away like the bark of an oak when felled in May. Each square is worth 2 dollars, therefore a rhinoceros is a valuable prize to the Arab hunters.

It is difficult to believe the rapidity with

which vultures will consume a large animal when it has been divested of the skin. Should a buffalo die, these birds are helpless, as they can only work at the eyes, and beneath the tail, the hide resisting their attack until decomposition shall have commenced; but, when skinned, a cloud of these repulsive birds will settle upon the carcase, and it disappears in much less than half an hour. This is the case in Abyssinia, where vultures are more numerous than in any portion of the globe which I have visited.

Many years ago there was a long and interesting discussion in the *Field* respecting the power of sight or scent in directing the vulture to its prey. Of course, views were expressed upon opposing sides; one declared that the bird discovered its food by sight, others pronounced in favour of guidance by scent alone.

Common-sense would suggest that a bird which soars at such an enormous height that it is frequently invisible to the naked eye would not ascend without a purpose, as there can be no food attraction in the great wilderness of space. What is that purpose? It is to obtain an extensive field of observation upon the world beneath. If a bird hunted by scent, it would assuredly remain as near as possible upon the surface to obtain that scent, instead of soaring in an opposite direction, where the strongest smell could never be detected.

I have tried the experiment practically, many times.

When an animal is killed and skinned, before the operation is completed the first bird to appear is the wily and omnipresent crow. The next is the ordinary buzzard. Both these birds are near the surface of the earth, seeking their food with untiring energy; but although they may have keen powers of scent, even they, in my opinion, are mainly guided by their acuteness of vision, as they are always on the alert, hunting in every direction, and in fact keeping a sharp "look-out."

The third arrival is the small red-necked vulture. This bird descends from a great height.

It is now most interesting to watch the concentration from all quarters of the compass; this is easily arranged by lying beneath a bush, and shading the eyes while you gaze into the deep-blue sky. It will appear to be alive with the smallest flies, all moving, all hurrying, and descending. These become rapidly larger, and you are aware that they are vultures, collecting from such enormous altitudes, that, were a mountain-top exposed, it would be capped with everlasting snow. While you are straining your eyes to peer into those blue vaults, you are startled by a tremendous rush like the roar of a rocket; this is the descent with closed wings of one of the large bare-necked vultures, which has plunged like a plummet for some 1000 feet, to share in the feast below.

All those birds, flying at high altitudes, have been soaring upon endless wings, never fatigued by motion, as they seldom flap, but only adjust themselves to the currents of air upon which they float; and having with their extraordinary powers of sight observed the hurry of smaller birds to some attractive point, they have at once directed their course, to fulfil the Biblical expression, "Where the carcase lies, there shall the eagles (vultures) be gathered together."

The audacity of the vulture is remarkable, in countries where it pursues its course undisturbed. I have known an instance where, in a serious battle, in the midst of musketry and the dense smoke and flame of a general conflagration, the vultures mutilated the bodies of the killed before they could be carried off the field.

Last, but not least, of all birds of carrion tastes is the adjutant. When the buzzard has driven away the crow, the red-necked vulture has driven off the buzzard, and the bare-necked vulture has kicked out the red-necked intruder, the long-legged and gigantic-beaked adjutant arrives upon the scene of turmoil, where feathers, dust, and blood are mingled with the shrieking and quarrelling of mixed varieties. All stand clear when the adjutant appears, as the long bill delivers its pecks to the right and left, and commands attention and respect. This bird, which carries its supply of water in a bag beneath the bill, pendant from the throat, flies at a higher altitude than any other, and arrives upon the scene the last,

owing to the greater distance it has been forced to travel. All these birds have been necessarily directed by sight, and not by the sense of smell.

The sense of vision may be continually observed by any person who has experience of countries that are full of living creatures. When the grass is fired in the dry season, there may not be a bird in sight, but directly that the dense volumes of black smoke darken the air with rolling clouds upon the earth's surface, a great variety of birds are almost immediately attracted. The buzzard, the fly-catchers, and, curiously enough, the bustard (or houbara), which is generally so scarce, all appear upon the dusky scene, and challenge the smoke and flames, to pursue the locusts, which are endeavouring to escape from the advancing fire.

The so-called rhinoceros bird, which is supposed to afford the animal some notice of approaching danger, is not confined specially to that particular beast, but it is to be seen frequently picking the ticks and other vermin from the backs and sides of buffaloes, as starlings may be seen upon the cattle in England during the warm days of summer. There is also a so-called crocodile bird, which is accredited with watchful instincts in the interest of the animal it attends upon; this is the ordinary plover, which when alarmed cries in good English, throughout the world, "Did-he-do-it? Did-he-do-it?" These birds are not employed in protecting the animals they wait upon, but they are simply searching for insects which infest such creatures, and when

disturbed themselves, their cries and movements naturally alarm the beasts upon which they fatten.

I have had no personal experience of the Indian rhinoceros, which is heavily protected by thick folds of skin, instead of the comparatively smooth exterior of the African species; but the habits of the animal appear to be somewhat similar, with the exception of its frequenting marshy localities.

I have never found the African rhinoceros in the neighbourhood of swamps, but, on the contrary, I have generally met them in dry and elevated places, at the base of rocky hills, or in woods, at some distance from a river. Certain animals have their regular hours for drinking: the rhinoceros in Africa approaches the water an hour after dark, and during the day it may retreat several miles inland. The female Ketloa has a longer horn than the male, but more slender. The males are continually grinding their horns by sharpening them upon rocks and the trunks of trees; this process reduces their size, from continued friction.

The female has only one offspring at a birth, and the ugly little calf is well protected by its mother. In a very few weeks after its introduction to the world it becomes exceedingly strong and active, and follows its mother over the rough ground at considerable speed. At that early age, when from two to four months old, the young ones are captured by the sword-hunters, who hunt the mother until the calf becomes thoroughly fatigued.

When the vast bulk of a rhinoceros is considered,

it is astonishing to see the speed that this heavy animal can attain, and continue for a great distance. I have hunted them in company with the Arabs, and for at least 2 miles our horses have been going their best, keeping a position within 5 or 6 yards of the hind-quarters, but nevertheless unable to overtake them before they reached an impenetrable jungle. It is the peculiar formation of the hind legs which enables the rhinoceros to attain this speed; the length from the thigh to the hock is so great that it affords immense springing capacity, and the animal bounds along the surface like a horse in full gallop, without the slightest appearance of weight or clumsiness.

Upon a level plain, free from bushes or stones, a good horse would quickly overtake the black rhinoceros, but the animal is seldom found upon such favourable ground, and its strength and three-hoofed feet give it a peculiar advantage for travelling at a high speed over a rough surface that would test the endurance of the best horse.

There is considerable danger in shooting a rhinoceros, owing to the difficulty in stopping a charge. The position of the two horns makes it impossible to reach the brain by a forehead shot, as the bullet, should it strike a horn, would certainly deflect. If you are slightly on one side, there is a direct line to the exceedingly small brain, exactly in front of the eyes, but this is extremely difficult to hit, and must be hazardous. The bone of the skull is the hardest of any animal in existence, and upon

one occasion a No. 10 bullet struck the head just in front of the ear, and failed to penetrate. The animal fell to the ground, stunned, but recovered its feet and ran half unconsciously past me, giving me the opportunity to run alongside and fire the remaining barrel behind the shoulder, which immediately finished the encounter.

I was not aware at the time that the No. 10 leaden bullet had failed to penetrate; but upon an examination of the head, I found the lead wedged into the joint of the lower jaw; the skull was slightly fractured, but not actually penetrated.

Upon another occasion I was stalking a bull rhinoceros which I had observed from a distance, and it had disappeared upon the other side of rising ground. Feeling sure that I should reach it by running quickly forward, upon my arrival at the spot where I had lost sight of my object I detected it among a few bushes not 20 yards distant. There were a number of brown-coloured rocks scattered about the surface, nearly as large as ordinary grindstones. Taking advantage of these, I knelt behind one and fired at the shoulder. Instead of falling, the rhinoceros immediately turned towards the smoke, which fortunately was drifting across to my right in a strong breeze. With stupid astonishment it regarded this unsubstantial cause of disturbance, and followed it until I again had a good chance within only a few yards. The No. 10 quicksilver and lead conical bullet shot completely through the body, entering behind the right shoulder, and

making its exit upon the opposite side. The animal staggered a short distance, and then, emitting a few shrill squeaks, quite disproportioned in sound to the great size of the beast, it fell and died.

This proved the advantage of a hardened and heavy bullet for such an animal, instead of pure lead, although the latter would have been preferable for a thin-skinned beast.

Although the rhinoceros is dangerous, I have never heard of many casualties among sportsmen. This may be explained by the comparatively small number of persons who have engaged in the sport. It is quite impossible to determine the exact amount of risk in the encounter with any animal, as they vary in character and pugnacity. The black rhinoceros is generally accepted as the most vicious, and the huge white variety the most harmless, but the uncertainty in the sport is the charm to the hunter, and I will relate an incident that befell a friend of mine, which will exhibit this uncertainty in a striking manner.

Mr. Oswell was one of the early Nimrods in South Africa, at the same time that the renowned Roualeyn Gordon Cumming was paving the way for fresh adventures. There never was a better sportsman or more active follower of the chase than Oswell; he had gone to Africa for the love of hunting and adventure, at a time when the greater portion was unbroken ground. He was the first to bring Livingstone into notice when he was an unknown missionary, and Oswell and Murray took

him with them when they discovered the Lake N'gâmé. He had a favourite double-barrelled gun made by Purdey. This was a smooth-bore No. 10, specially constructed for ball. Although a smooth-bore, it was sighted like a rifle, with back-sights; the gun weighed 10 lbs. The owner most kindly lent me this useful weapon when I first went to Africa in 1861, therefore I can attest its value, and the hard work that it had accomplished. A portion of the walnut stock had been completely worn away to the depth of an inch by the tearing friction of the wait-a-bit thorns, when carrying the gun across the saddle in chase at full speed through the hooked-thorn bushes. The stock had the appearance of having been gnawed by rats.

At the time of Oswell's visit, the country was alive with wild animals, all of which have long since disappeared before the advance of colonial enterprise and the sporting energy of settlers. There was a particular locality that was so infested with rhinoceroses that Oswell had grown tired of killing them, and he passed them unnoticed, unless he met some specimen with an exceptional horn. He was riding a favourite horse, which had been his constant companion in countless shooting incidents, and he happened to remark a large white rhinoceros standing in open ground alone. This animal possessed a horn of unusual length, which made the owner a worthy object of attention.

Oswell immediately rode towards it. The animal took no notice of his approach until he arrived

within about 100 yards. The *Rhinoceros simus* (white species) is not considered dangerous, therefore he had approached without the slightest caution or hesitation. I forget whether he fired; but I well remember that the beast calmly confronted the horse, and slowly, but determinedly, with measured pace, advanced directly towards the rider. Like an object in a disturbed dream, this huge creature came on, step by step, leisurely but surely, never hesitating or halting, but with eyes fixed upon the attacking party. Firing at the forehead being useless, Oswell endeavoured to move either to the left or right, to obtain a shoulder shot; but the horse, that was accustomed to a hundred contests with wild animals, was suddenly mesmerised, and petrified with horror. The quiet and spectre-like advance of the rhinoceros had paralysed and rooted it to the ground; trembling all over, its limbs refused to move; the spur and whip were unavailing; the horse felt that it was doomed.

This horrible position endured until the rhinoceros was within only a few paces distant; it then made a dash forward.

Oswell describes his first sensations, upon returning consciousness, nearly as follows. He found himself upon a horse. The reins were not in his hands. A man was walking in front, leading the animal by the reins, which had been pulled over its head. There were natives upon either side, apparently holding him upon the saddle; a dreamy

feeling, and a misty and indistinct view of the situation, was sufficient to assure him that something must have happened. He felt certain that he must be hurt, but he had no pain. He began to feel himself with his hands, and he felt something wet and soft upon one thigh.

The fact was, that the long horn of the rhinoceros had passed *through* his thigh. It not only passed through his thigh, but through the saddle flap, then completely through the horse, and was stopped by the flap upon the other side. The horse and rider together were thrown into the air, and the inversion was so complete, that one of Oswell's wounds, a cut upon the head, was occasioned by the stirrup-iron, which proved the inverted position.

The horse was of course killed upon the spot, and the Caffres came to their master's assistance, and placed him on his spare horse, upon which they held him until they reached the camp. This wound kept the great hunter prostrate for several months. It is many years since Oswell told me this story, but I think I have narrated it exactly.

It must be remembered that this rhinoceros belonged to the so-called harmless species. This incident is sufficient to exhibit the utter fallacy of a belief "that any kind of animal is invariably harmless." We find that many beasts which are accredited with bad characters conduct themselves occasionally as though abject cowards; in the same manner, those which are considered timid may, when least expected, exhibit great ferocity.

CHAPTER XVII

THE BOAR (*SUS SCROPHA*)

THE carnivora exhibit the natural character of beasts of prey; although, acting generally on the offensive in their pursuit of animals for food, they are not disposed to provoke or to prolong a fight, and they seldom attack man unless under provocation. The buffalo, we have seen, is a stubborn and powerful antagonist; but, for a really thorough and determined fighter, who does battle for the love of the thing, the boar stands foremost among all other animals. There is no creature more common to all climates and countries than the pig; and although, when domesticated, we find an infinite variety, there is very little marked distinction among the wild hogs of Europe and Asia. The conditions of localities, and the abundance of food, or the reverse, exert a natural influence upon its size, but were a photograph taken of a wild boar in Europe and in Asia Minor there would not be any perceptible difference. Throughout India and Ceylon they are the same in general appearance, differing somewhat in size, and, to a certain extent, in length of bristles,

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according to the influence of temperatures. In cold climates the pig is protected by a growth of coat in proportion to its requirements, but in all other respects it is much the same, and it would be difficult to distinguish any features that would constitute a separate variety.

It is well known that pigs are omnivorous; their teeth are accordingly designed for every kind of food, with formidable arrangements for offence. Although they sometimes differ in the number of molars, they generally have twenty-eight, and six incisors in each jaw. The canine teeth are immensely long, and turned upwards, forming tusks, exactly similar to those of the hippopotamus, the upper jaw containing shorter tusks, against the sharp edge of which those of the lower jaw clash when shut, and thus, by continual friction of surface, preserve the cutting edge in order.

The length of a good pair of boar's tusks extracted from the jaw is about 10 inches outside curve. Of this length, 5 inches are imbedded in the jaw, leaving only 5 inches as a weapon of offence.

It is astonishing to see the amount of mischief that can be achieved by so insignificant a weapon. The boar has been associated with the hunting triumphs of ancient history, from the remote period when Adonis, the beloved of Venus, fell before its tusks. The Macedonian boar was considered to be the most formidable of all wild animals, and to the present day there is no creature in the brute

creation that will hold its own against all comers with equal pluck and tenacity of purpose, so determinedly, as a staunch old boar.

This animal exhibits more sport than any creature that I know. It may be hunted in various ways, according to the conditions of the ground. In forest countries it may be followed on foot with the aid of hounds, and, when brought to bay, killed with the hunting-knife or spear. I have always used the knife.

In the open, where riding is practicable, there is no sport in the world that surpasses the excitement of "pig-sticking." I regret to say that I have had very limited experience in this latter phase of hunting, owing to the scarcity of the game when I was in a pig-sticking locality; but the hunting upon foot with dependable hounds was a sport that I enjoyed for many years.

Shooting wild boar, after the foregoing description of hunting, is a very tame proceeding; until a boar is wounded, and you have to look for him in thick jungle.

There is an immense amount of character in a pig. Not only is it a fierce antagonist, but it is a clever and thoughtful creature. It is all very well to quote the word "pig-headedness," but there is a meaning in the name that commands respect. A pig knows its own mind, which very few human beings can assert; when it has made up its mind, it acts, without any trace of hesitation; and in this it sets a bright example to many of our generals and so-

called statesmen. If a pig determines to go forward, nothing will stop it; but if it makes up its mind to break back through a line of beaters, even should there be a serried rank of a hundred elephants, I should like to see anything on earth that would stop a pig. It will dash back, giving a sharp toss of its long head to the right and left as it goes, and leaving its mark even upon the tough legs of elephants should they have opposed its passage.

Few people would credit the speed of a pig until they have to overtake it. The feet are curiously constructed, as each foot has two toes just behind and above the hoof; these only touch the ground should it be deep, but there can be no doubt that they add to the security of the step, when the foot is widely spread, in galloping over rough and uncertain ground.

I have never seen a wild pig make a mistake, no matter what the quality of the ground may be. In deep snow, upon the mountains in Asia Minor, I have seen them plough their way through long distances, leaving a trough, as though a canoe had been dragged through.

Their power of scent is acute, and it is highly interesting to watch them when unsuspected. If the jungle is being beaten, an opportunity is almost daily afforded to watch their habits; especially should you be too proud to demean your rifle by shooting anything so humble as a pig.

I have frequently seen a pig arriving apparently direct for my position, but it meets a small jungle

path upon which some person has recently been walking. The pig at once halts, smells the ground, and waits, listening attentively and making up its mind. It may be that it determines to go forward; if so, it starts off at its best pace; but should it declare for a retreat, it waits, listens for the advance of the line of beaters, and quietly hides in the densest bushes. At last, with shouts sufficient to scare away every animal for miles around, the beaters arrive; you know the pig is there, but nobody has yet discovered it. Just as the beaters have brought their line in good order to the extreme margin of the jungle, there is a sudden outburst of shouts and yells; a rush in all directions, screams and halloos, sticks going upon all sides; a few short angry grunts, and a rattling of loose stones, explain that the boar has broken back through the line of beaters.

Pigs multiply in such an extraordinary manner that in some countries they become a pest to the unfortunate agriculturist. When travelling, their pace is a shambling trot, at about 5 or 6 miles an hour. They keep this up for a considerable distance, and it is astonishing to see a country that is quite devoid of game, but nevertheless the fields are guarded by numerous watching-posts to scare the wild pigs from the crops at night. These animals must travel 6 or 7 miles from the jungle-covered hills to make a raid upon the well-known fields; sometimes they will exceed this distance, and again return to their unknown haunts before the rising of the sun. The great strength and activity

of the wild pig are exhibited in the little ones, which follow their mother wherever she may lead them, and never appear to exhibit any signs of weariness. They generally are gregarious, and in India, parties of twenty to thirty may be seen together, but in Ceylon I have seen hundreds in a herd.

I have never seen such large boars in any portion of the world as in Ceylon. The reason is evident, that food is plentiful throughout the year; therefore, with plenty of water in which they can wallow at all seasons, and roots, snakes, dead animals, and every conceivable material upon which a pig will fatten, Ceylon is a perfect pig's paradise, unsurpassed for true enjoyment.

The wild pig of Northern Africa is the same as the European species, but there is a distinct variety throughout the entire area of Central Africa and a portion of the south which differs materially from the ordinary pig; this is the wart hog, *Sus Africanus*. This animal is superlatively ugly: the head is disproportioned to the size of the hog; the tusks are so enormous that they appear as though they had belonged to some much larger creature, and had merely been assumed as masquerade; there are two prominent protuberances upon either side of the eyes, also two pendulous warts of large and hideous growth; and when this ugly monster becomes excited, it cocks a long thin tail, with bristles upon either side, like that of an elephant. This appendage is carried straight in the air, as stiff as a stick, which gives the animal a ridiculous appearance.

The boar of this species does not attain the same great size as those of Europe and Asia, and the usual weight when cleaned would be about 170 lbs. There is a striking peculiarity in the formation of the teeth, as this is the only animal, except the elephant, which possesses the arrangement for a continual reproduction from the rear of the molars.

This extraordinary animal possesses, in the upper jaw, two incisors, six molars, and two tusks; in the lower jaw, six incisors, six molars, and two tusks. The molars are most peculiar, being formed of three parallel rows of cylinders of hard enamel, united vertically by a less hard cement, which forms a solid block somewhat similar to the molar of an elephant. The rear molar is $2\frac{1}{4}$ inches in length, $\frac{7}{8}$ inch in breadth, and the front molar $\frac{5}{8}$ inch in length. The lower or cutting tusks protrude $4\frac{1}{8}$ inches from the lip, and the upper tusks project $8\frac{3}{4}$ inches, and each is 5 inches circumference; these, as in the ordinary boar, form a whetstone, against which the lower cutting tusks are sharpened by gnashing the teeth. These are actual measurements taken from a specimen in my possession, but I have seen others which far exceed these, both in length and thickness.

Although this species, from its formidable armoury, must be a fighter, I have never had any difficulty that I can remember: they have charged now and then, and been shot and despised, whereas, had they been hunted with dogs, they might have proved worthy adversaries.

I will not pretend to introduce experiences of

pig-sticking in my description of the wild boar, as so many have written glowing narratives of this great sport of India; but I cannot treat of the pig without personal reminiscences of those glorious, but for the hounds, fatal hunts, which in the days of my youth formed the excitement of Ceylon sports. In that country we seldom or never used the spear. I never in my life used it against a boar on foot, but the only weapon was the hunting-knife.

My old hunting-knife is at this moment hanging against the wall, among a number of my old friends that are associated with early years; and when I regard this trusty servant, that shows no gray hairs to mark the advance of time, I cannot help recalling the words which I wrote so many years ago at the conclusion of my first publication, *The Rifle and Hound in Ceylon*:—"The day's sport concluded, the evenings were most enjoyable, and will never be forgotten. The well-arranged tent, the neatly-spread table, the bed forming a triangle around the walls, and the clean guns piled in a long row against the gun-rack, will often recall a tableau in after-years, in countries far from this land of independence. The acknowledged sports of England will appear child's play; the exciting thrill will be wanting, when a sudden rush in the jungle brings the rifle upon full cock; and the heavy guns will become useless mementoes of past days, like the dusty helmets of yore, hanging up in an old hall. The belt and the hunting-knife will alike share the fate of the good rifle, and the blade, now so keen, will blunt from sheer neglect."

This was written in 1853, and I have lived to see the forecast of events fulfilled. At the same time that the old hunting-knife was discarded, and now hangs idly from the wall, it simply was exchanged for another pattern, which has been in active service from that period, and was adapted for shooting expeditions, whereas the former was specially constructed for hunting wild animals with the hounds, when a thrust with the broad-bladed knife was the termination of a glorious bay. This style of sport required a peculiar weapon of great weight and strength. It was necessary to combine the ordinary power of a knife with the efficiency of a bill-hook, for clearing jungle when necessary; for cutting poles, to carry home the heads and horns of sambur deer, etc.; to fell the young trees for building an impromptu hut; and for the hard work of cutting up large animals into quarters, for conveyance by coolies, where no roads existed, either for pack animals or carts. It was difficult to arrange a knife that would comprise all these desiderata, but Mr. Paget, of Piccadilly (long since dead), was a first-rate cutler, and he produced the perfection of a blade. The knife weighed exactly 3 lbs., including the sheath. It weighs 2¼ lbs. now without the cover, being reduced by constant grinding during many years of hard work. The blade was 1 foot in length, 2 inches wide, and double-edged 3 inches from the point, slightly hollow in the centre (1¾ inch wide), and again 2 inches wide at the base, and $\frac{5}{16}$ inch thick at the back.

I give the exact measurement of this blade, as it performed several curious feats during the period of active service. When sharpened to as keen a point and edge as could be obtained, this highly tempered steel would pierce a hole right through one of the old rim pennies, and would cut the same coin into two halves, when placed upon a block of oak, without in the least degree either turning the point or damaging the edge. It will of course withstand the same test at the present moment.

This was the perfection of a weapon for the purpose required; it was the companion of every hunt where no fire-arms were permitted, and, whatever the game might be that was discovered by the pack, it was brought to bay and killed by the hounds and hunting-knife. Sometimes it might be a sambur deer, which was the recognised object of pursuit; at other times it might be the small red-deer; frequently a wild boar; and sometimes, but rarely, a buffalo, which many years before had deserted from its owner and run wild among the forests of the Ceylon Highlands.

As I class the pig with the pachydermata, which will be concluded in this chapter, I introduce the hunting-knife as closely connected with hunts that will be continued with the deer (*Cervidæ*), as the experience of such animals was almost identical in the same period and locality. It may readily be understood, from my detailed description of the weapon, that such a knife, in the hand of any person who knew how to use it, would have been nearly as

formidable as the old Roman sword. I have on more than one occasion stood against the charge of a sambur stag at bay, and met the attack with the point of the knife in the face, held firmly at arm's length. This requires great strength of arm and a firm footing, but, above all things, a blade that is more dependable than the British bayonet.

For seven years I kept my own pack of hounds at Newera Ellia in Ceylon, 6200 feet above the sea. During that time I was hunting regularly throughout a large extent of country, and I much regret that I kept a game-book only during the last two years of my residence in that delightful sanatorium. I commenced the diary at the instigation of a friend, to whom I owe much for the advice, which has afforded me intense pleasure when looking back to former years. In that journal I noted down every detail of each separate hunt, and when I regard the sum total, and remember that every animal was run down on foot, and killed with the knife, when brought to bay and seized by the hounds, I must acknowledge that anything that I have been able to accomplish since that time has been a mere nothing compared with the hard work of that interesting period. The journal commenced in October 1851 and ended in March 1854, at a time when severe illness necessitated an immediate return to England. In those years the diary shows the following list of killed :—

Sambur deer, 138. Wild hogs, 14. Red-deer, 8.

During only a portion of those years I was

accompanied by my brother; for five years preceding I was quite alone, excepting the presence of my huntsman, and occasionally accompanied by a friend. The success throughout the entire period was in the same proportion as that enumerated in the diary. Although many wild boars were killed, they were never objects of the hunts, but, on the contrary, they were if possible avoided, as an encounter invariably resulted in the sacrifice of hounds, either killed, or incapacitated by serious wounds.

It was no easy matter to call the hounds off a scent when in the wild forest, where they could run riot at their own free will, and there was no means of reaching them.

If I saw the fresh tracks of a large boar, I always endeavoured to collect the pack, and secure the hounds in couples, in order to prevent them from following upon the inviting scent. But too frequently I heard the opening notes of a leading hound before I could gather my pack together; in that case there was no longer any hope, as the hounds would immediately join in full cry, and there was nothing more to do but to await the event.

A boar never runs for any great distance before the hounds; it goes straight away at the first burst, but quickly turns, first up one ravine, then down another, and comes to bay after a run of about ten minutes, in some difficult bit of thick thorns or tangled bamboo, or any other place of refuge, in which it can face the hounds, and at the

same time be secure from either a side or rear attack.

This places the seizing hounds in a dangerous position, as they are obliged to rush direct upon the boar's tusks, unless they can manage to break through the barriers upon either side. Even then, they would be hampered in their attempts to get away from the quick and desperate lunge, which the boar makes when least expected. All these difficulties have to be well considered, and the nature of the animal thoroughly understood.

Every creature, whether human or of the lower creation, is born with certain gifts, excepting a few unfortunates, who appear to have been passed over. It is impossible to educate a man or an animal to be a first-rate performer in anything unless the nature is within. A thousand boys may be educated for the military profession with the same masters, and equal care bestowed upon their training, but how many will become distinguished generals? Only those who have natural gifts. There will be many who become generals, but how many who become distinguished? It is the same in everything. Take music, for an example. Every girl learns music in some horrible form or other, which is a misery to herself and an expense to her parents; a worry to her master, and an infliction upon her audience, when in ripening years she torments them with the results of musical education. On the other hand, a few are born musicians; they require but little care in early

life, and, whether through voice or hand, they are born to enrapture their hearers.

It is a dreadful descent to jump suddenly to dogs, but it is nevertheless true. There are dogs of all sorts and degrees of cleverness, they are born with gifts; there are other dogs which are born to be stupid, they are beyond teaching. I had a spaniel, a very lovely and energetic dog, a great and untiring hunter; that dog would have gained a prize for beauty; but it had its peculiar ways. If I shot a wild-duck, and it fell into the water, he would immediately plunge in to retrieve the game; but if there happened to be a sand-bank near that duck, or should the opposite shore be closer than the bank upon which I stood, he would assuredly carry the duck to the nearest land, and leave it there, instead of bringing it to me. That dog was born for the Royal Humane Society, but not for a retriever. Nothing would teach him better; his one idea was, that if a bird fell into the water, no matter how, it was his business to fetch it, and to put it upon the first and most convenient dry land; beyond that, his intellect did not extend.

It is the same with all creatures, but this natural talent, or the deficiency, is peculiarly marked in hounds, especially with those large dogs which I was accustomed to denominate as "seizers." The pack was composed of thoroughbred fox-hounds, others which were a cross between fox-hound and pointer, fox-hound and blood-hound,

and about half a dozen large dogs, such as Scotch deer-hounds, kangaroo-hounds from Australia, and all kinds of curious cross-breeds, that would produce powerful, speedy, and savage dogs. Some of these met an early grave, as they did not temper valour with discretion. The dog that will fly straight into a boar's face, or into the face of a sambur stag, is perfectly certain to meet a glorious death, before its career shall have actually commenced. There are seizers who are born with gifts. Equally courageous, they fight to win; like a skilled swordsman, they enter scientifically upon the strife, instead of rushing heedlessly upon the point of their adversary's weapon.

I have had dogs of immense power and courage, combined with wonderful discretion. Such a dog, when a boar is at bay, would certainly refuse to attack unless holloaed on by his master; at the sound of the well-known voice he would fly straight into the jaws of death; but if left to his own instincts he would join in the chorus of the bay, and watch for an opportunity. Any stranger would imagine that the dog was devoid of pluck, should he be seen, now advancing with apparent boldness, then suddenly springing back when the boar made an unexpected demonstration; but with a little more patience, it would be seen that he was only trying the character of his game, and reserving his power until the boar should make some audacious charge, which would for the moment separate it from its secure asylum. Then, at the

exact moment, with a spring from one side, the dog would jump across the shoulder of the boar and seize the ear upon the opposite side, thus pulling the boar's head in a manner that would turn its nose up in a contrary direction, and save the dog from a collision with the tusks. This is high art in seizing, and it comes natural to some dogs, but never can be taught.

The usual plan, when hunting on foot, is to wait in one position from the earliest notes of the "find," until the chorus of voices proclaims the bay. You then tear your way through the jungle in the endeavour to reach the point as soon as possible. I was always accompanied by two faithful seizers, which never left my side; this was a great advantage, as when, after great exertion, we neared the spot, it was only necessary to holloa the dogs on, and the two big seizers instantly responded, and appeared as fresh allies upon the scene. In another moment all the seizers resolutely sprang upon the boar, regardless of cuts and thrusts. The peculiar sound of angry grunts, and the excited yells of hounds, bespoke the desperate character of the conflict.

There was then no time to lose, and, with the hunting-knife drawn, a few struggles through the tangled brake brought me upon the scene. One hound would have assuredly secured his hold, as I have described, upon the opposite ear, and would endeavour to turn the boar's head upwards, by pulling back. Another would have seized the ear

next to him, while the remaining seizers would have tackled the boar in every direction, one hanging beneath its throat, another by the thigh just above the joint. Without a moment's hesitation it was then necessary to close, and drive the long knife up to the hilt behind the shoulder.

I have seen many severe struggles with boars of the larger size, which have dragged the pack of seizers, and myself clinging to the long bristles on the back, with the knife buried in the shoulder, until, after a glorious resistance, the boar has fallen dead, fighting to the last gasp with desperate courage, till the moment that life ceased.

The large and heavy hunting-knife was an admirable weapon for this style of hunting, as both point and edge could always be depended upon. The skin of a boar is tough, and requires an acute point, otherwise the blade would fail to penetrate at the critical moment when the vital place should be exposed. The scrimmage when a boar is seized, and the larger dogs crowd upon him, must be seen to be understood. It is a difficult matter during such confusion to discover a clear spot, where the knife can be driven behind the shoulder without injuring one of the hounds; some hold on like bull-dogs, others lose their hold, and again spring madly upon the boar's back, seizing thoughtlessly the first portion of the animal that meets their teeth. Nothing requires more cool dexterity than to come in exactly at the right moment, to assist the pack, and to prevent serious

casualties; which would assuredly happen if the struggle were indefinitely prolonged. A masterly attack on the part of the hunter, with a clever thrust exactly behind the shoulder, completes the victory in less than half a minute.

Then the ghastly wounds of hounds require attention, and the big seizers, panting with exhaustion, yet raging with the excitement of the recent fight, once more dash forward, and fix their teeth in their late antagonist, hardly believing that life is quite extinct.

It may readily be imagined that this style of hunting is attended with considerable danger, as the peculiar difficulties of the ground make active movements terribly uncertain. I once saw a companion fall backward when charged by a boar, in the stony bed of a dry nullah. Fortunately I was close enough in the rear to seize one hind leg of the animal, and pull it back with my left hand, while I gave it the knife behind the shoulder when it attempted to turn. This was not a large boar, otherwise I could not have held it.

There is a great risk when a boar is at bay in dense jungle, and the hunter is breaking his way to reach the spot. It is impossible to see three feet in advance, therefore he may possibly appear upon the scene of conflict exactly opposite the boar's face. In that case it is absolutely certain that the animal will charge straight at him, unless securely held by very powerful hounds.

The hunter must never lose his head through

rash excitement; and upon no account should he arrive before he is certain that the seizers have the boar within their grip. Even then there may be a risk, should he appear suddenly in front of the maddened animal, as it may shake off the dogs by a sudden jump forward, and inflict a severe injury before the hounds should be able to restrain it.

I have seen something that approached an accident upon several occasions, but the narrowest escape occurred upon the hills at Newera Ellia, in a jungle of dense bamboo grass. Although this tangled mass is termed "grass," it is merely a species of bamboo which grows at an elevation of about 6500 or 7000 feet, in a climate too cold for its complete development. Instead of forming a hollow cane, it extends in long and thin creeping stems, entwined together, forming a mass which can be broken through only with the greatest difficulty.

A large boar had turned to bay after a short run within a jungle composed of this dangerous vegetation.

Having broken my way with great exertion until I was within 5 or 6 yards of the "bay," I holloaed the dogs on. Two powerful long-legged hounds immediately sprang from my side, and in a few moments I heard the peculiar angry sounds which told me that the boar was seized. I tore my way through the tangled jungle, and almost immediately found myself in the presence of a large boar exactly facing me. Without an instant's

hesitation, it made a supreme effort to attack; its charge was so furious and sudden, that, being unexpected by the dogs, they lost their hold, and for a moment the boar was free. I instinctively jumped upon one side, as the brute rushed at me, and delivered a tremendous cut with the heavy knife across its back, just behind the shoulder. At the same moment a very powerful bitch named Lena had recovered her hold upon the boar's thigh. . . . This large boar fell dead! It never moved a muscle.

In those days I could hit tolerably hard, but the effect of this blow was so instantaneous that I was almost incredulous when I saw the body of the boar lying at my feet, cut half-way through. The knife had struck downwards, as the boar had passed at full speed; the body, being stretched through the weight of the bitch that had seized the thigh, gave way at once before the keen edge of the heavy blade. The spine was cut clean through, and the knife had passed through the vitals.

This boar weighed about $2\frac{3}{4}$ cwts., as nearly as I could estimate its weight, from its length and general appearance. The largest that I have ever killed with the hounds and hunting-knife weighed at least 4 cwts., and the head alone, when slung upon a pole, made a tolerable load for two men, who were well contented to be released from their burden after a long march to camp; the carriers being my brother and myself.

The Ceylon style of hunting must depend

entirely upon the hounds; even then, as I have shown, the boar, if possible, would be avoided. Boar-hunting cannot be classed as a Ceylon sport; it is a misfortune when the hounds take up the scent.

In the low country, where wild pigs swarm, I seldom or never condescended to fire at them. The coolies love the fat and flesh of these indigestible animals, and the result is certain to be either fever or dysentery. For this reason alone I reserved my fire whenever a fine boar presented itself, as our people were sure to possess themselves of the flesh, although it was strictly prohibited. I have often felt, when in hot climates, that Moses and Mahomet were right in forbidding the use of pork. A pig is a filthy beast in its tastes, and there is no garbage that it would refuse. A foul feeder must to a certain extent have foul flesh; the pigs of the low country in tropical climates are the omnipresent scavengers; common-sense should warn the consumer of the danger of such food.

The wild pigs of Newera Ellia are highly estimated, as they cannot possibly obtain anything undesirable as food. The jungles are full of roots and berries, and there is nothing objectionable within reach of the wild hog.

In Turkey and Asia Minor I have frequently eaten wild boar. In the month of November they are delicious, as they have fattened upon walnuts, sweet chestnuts, and a great variety of wild fruits.

During the Crimean War, when the cavalry went

into winter quarters at Scutari, I was living with the officers of the 12th Lancers; I started off upon a trip to Sabanja, about 24 miles beyond the town of Ismid.

This is a curious and picturesque vestige of the ancient city of Nicomedia, situated at the extreme end of the Gulf of Ismid, about ten hours' voyage by steamer from Constantinople. The town occupies the entire face of a lofty hill from the base to the summit, and the red-tiled roofs and quaint colouring of the houses, interspersed with occasional tall cypress trees, give a peculiar theatrical appearance, resembling a scene upon the stage. The blue water of the gulf affords a highly artistic foreground, as this arm of the Sea of Marmora washes the quays at the base, while opposite the town, on the other side of the gulf, a chain of mountains walls in the shore, and forms a continuation of a mountain range inland. A small river flows through the valley; this is an affluent from the Lake of Sabanja, a fine sheet of water about 9 miles distant, which receives the drainage of the mountains upon either side. This lake is about 12 miles in length, and 3 or 4 miles across at the widest part.

I found very little change when I made a subsequent visit in 1860. The road from Ismid to Sabanja was the usual example of Turkish administration; it had been commenced at some remote period, with grand intentions of a continuous line of pavement; this had evidently

been entrusted to a multitude of various contractors, some of whom had succeeded, while others had failed. The latter were the most numerous, therefore a route of 24 miles, through forest, running at the foot of the mountain range, was diversified by a succession of surprises; a tolerable piece of stone-paved highway suddenly ceasing, and a depth of mud of 2 feet receiving the traveller's floundering horse, without the slightest warning. As the route skirted the forest-covered hills, the drainage towards the lake a few miles distant on the east had scored the surface into numerous channels; these were partially bridged, but wherever the stones had become dislodged, the bridge remained impassable, as no authority expended money upon such trifles as repairs. It was dreadful to witness such a picture of neglect, where a most lovely and fertile country, within a few miles of a secure harbour, was completely paralysed through the absence of all-important roads.

A scramble of 24 miles upon good ponies may be amusing occasionally, but when baggage must be conveyed, the matter becomes serious. Even the pack animals fell down with their loads, in the places where contractors had failed, and where the broken bridges necessitated a descent into the treacherous torrent-bed. A ride to Sabanja was a journey in those days, full of misery to horse and rider, but the result of this difficulty of access was in favour of the game, as the

ubiquitous Briton had not included it among his "beaten tracks," or happy hunting-grounds.

Sabanja is a large town, situated exactly at the foot of the mountains, within half a mile of the lake, which at that spot is about 4 miles in width. Although the opposite shore is mountainous, the numerous slopes are cultivated in terraces, where mulberry trees are grown for silkworms, and fruit in great variety for the supply of Ismid and Constantinople.

On the Sabanja side, the mountains and valleys were unbroken forest, and the cultivation was confined to the level ground in the immediate neighbourhood of the town; this was apportioned into fields, where vines, apples, figs, pears, quinces, and mulberries were planted in rows, between which were crops of cereals, in somewhat rude imitation of the method pursued in Italy.

I had sent a messenger some days before us to engage a few rooms, in the absence of any public place of entertainment; we therefore rode through the Turkish quarter, then through the Greek, and at length, after nearly half a mile up the street, we arrived upon the extreme verge of the town, where the wild forest abruptly terminated within a few yards of the adjacent houses. This was the end of the Armenian quarter, and we entered the dwelling which had been engaged for our reception. The ground-floor was occupied by a cow and her calf; this looked propitious, as

the milk was close at hand. There was a flat-stepped ladder, which led through a ceiling of rough plank; upon ascending this, we arrived upon a very clean landing, with a couple of small rooms, and a kitchen close at hand. This was all very nice; we could see the cow by looking perpendicularly through the broad crevices between the boards which formed the floor; we could also smell her, and hear the calf.

There are no chimneys in Turkish houses. A large brazier of charcoal warms the room most thoroughly; but great caution is necessary in the use of this simple apparatus, as the charcoal must be in a complete glow before it is admitted to the room. Without this precaution the inmates would be asphyxiated. It was the winter (December) of 1860 when we were at Sabanja, and a few days after our arrival the ground was covered by a heavy snowfall. Unfortunately I had no spaniels, and my two pointers were useless for the covert, where woodcocks were in considerable numbers. The cold weather had brought all game down from the mountain-tops, and the wolves became so daring that they took a calf from a shed during the night, from a house next to that we occupied, the door not being securely fastened.

This was a sporting residence, on the margin of a forest that extended for an unknown distance. I could leave the house, and expect a shot at woodcocks within 150 yards from the

door. Wolves and jackals were howling close to our windows during the night, and wild hogs actually broke the fences and invaded the gardens, with an impudence that proved the difficulty of procuring their usual food. The game of the forests included bears (these had hybernated), wolves, boars, red-deer, roe-deer, pheasants, woodcocks; while snipe and ducks were found along the borders of the lake.

Although Sabanja contained a considerable population, comprising Greeks and Armenians, in addition to the numerical superiority of Turks, they all harmonised, and occupied their separate quarters of the town without a symptom of that antagonism of race or religion which is so generally accepted as the rule. Friday, being the Mahometan Sabbath, was the favourable day for a general hunting party; the Turks turned out with great spirit and geniality, to act in the capacity of beaters, while all those who possessed guns were delighted at the opportunity of sharing in the sport. I never saw people who enjoyed themselves more thoroughly; the hunt drew all classes and races together in the best of humours, and although I accompanied such gatherings for a couple of months, I never saw an instance of quarrelling or discontent. The effendi who governed the town always sent on Thursday evening to ask the hour at which I proposed to meet, and on the Friday morning at 9 o'clock, when I appeared at the rendezvous

outside the walls, I found several hundred people collected, some of whom were firing at marks, and all looking forward to the day's sport with keen enthusiasm.

In dense forests there is no other way to obtain sport except the old style of beating. Some persons declare this is not sport; such persons must accordingly remain at home; but if you travel about the world, you will assuredly discover that the inhabitants of a locality, no matter where it may be located, require very little teaching from a stranger. At first sight it would appear dangerous, when fifty guns are placed in various positions throughout a long line of forest, to intercept all animals within the beat; but no accident had ever occurred in the neighbourhood, and the vast numbers of large oak trees which composed the forest would be certain to intercept a bullet before it had passed through its flight for 50 yards.

In all these hunts a spirit of goodwill and fair-play pervaded the people. If the Turks killed wild boar, they handed over the game to the Christian community, who were delighted to obtain the meat. On the other hand, if the Greeks or Armenians killed a deer, it was presented to the Turks, most of whom, as hunters, regarded the death by bullet as equivalent to the cutting of the throat by a knife, and they accepted the animal without protest.

Some of the boars that we killed in these

drives were very large, and excessively fat. There was nothing so good to be obtained in the market; vegetables were very plentiful, and cheap. One favourite dish was wild boar, stewed with leeks, onions, and cauliflowers; to vary this dish when we had nearly tired, we changed it to "leeks, onions, and cauliflowers, stewed with wild boar." One of the largest I killed one night by moonlight, by wandering along the skirts of the forest upon the snow, and waiting until I heard the animal crunching through the frozen substance. Having a white paper fore-sight, I could shoot with tolerable accuracy. It was astonishing to witness how the wild hogs could plough their way through deep frozen snow. I was well furnished with snow-shoes, the wood being that of the fig-tree, light and tough, nevertheless I could never overtake these powerful and active animals, although they must have suffered considerably; I have frequently seen the snow discoloured with blood, where the sharp frozen surface had lacerated the legs of the hogs when breaking through, in ploughing their way forwards.

The pleasure of shooting at Sabanja consisted in the diversity of game; it was impossible to foretell what the creature might be that would appear before the line of beaters. Although we frequently shot roe-deer, I never attained a shot at red-deer. I took great pains, but these animals were invariably concealed amongst dense

rhododendrons near the tops of the mountains; I several times heard their sudden rush and caught sight of them only for one instant, but I could not fire.

There was excellent pike and perch fishing in the Sabanja lake, and at the expiration of our visit I determined if possible to renew my acquaintance with the people and their delightful wilderness. Fate has led me into various portions of the world since then, and in twenty-nine years there may have been a change that has driven the animals away.

About 4 or 5 miles from Ismid there was a capital snipe marsh, and the wild-rose thickets upon the border were full of woodcocks. The Greeks were professional chasseurs for the supply of Constantinople, as the daily steamer conveyed the birds to market in ten or eleven hours. These fellows used pointers, trained expressly; each dog wore a bell upon its collar, therefore when there was a cessation of jingling, the master knew that his dog was on a point. It is my opinion that the best companions for a person who is fond of sport in general are a brace of first-class clumber spaniels thoroughly broken not to chase, and never to hunt more than 20 yards in advance of the gun. Such dogs will discover a quantity of game, which would never be moved by a person unprovided with such assistants. It is a common occurrence that people disbelieve in the existence of game simply because they do

not see it; hares, woodcocks, partridges, and several other creatures, especially quails, will sometimes allow themselves to be almost trodden upon before they can be induced to move.

A good dog is always a useful companion in a forest, as it will detect the presence of an animal long before it would be perceived by the unassisted eye. Upon one occasion at Sabanja I had hired a Turkish sportsman, who possessed a little nondescript dog with only a stump of 2 inches to represent a tail. We were passing through thick rose jungle, when we suddenly missed the cur; a minute later, we heard vigorous barking within 150 yards of our position. Upon arrival at the spot, there was a very large wild boar standing at bay, with the little dog before it in a frantic state of excitement, but far too sensible to risk a close approach. I had been expecting woodcocks, but, knowing the uncertainty of the forest, I fortunately had a bullet in the left-hand barrel; a shot through the shoulder dropped the boar upon the spot, to the intense delight of the little dog, which immediately seized it by the snout, and endeavoured to shake the body twenty times heavier than itself. This was a low-born cur, but a jolly little dog, that must, upon the principle of heredity, have had some unknown but heroic ancestor. If any person wishes to shoot wild boar, a single dog of small size is better than a great number, as the boar, or even a sow, will

certainly not condescend to run far before a puny antagonist.

In the course of a long experience I have naturally adapted my tastes to the various portions of the world in which I have been situated; in many places where boars are shot, and are considered dangerous, I have not dared to relate or even to touch upon the incidents connected with the hounds and hunting-knife; but I must confess that after the sport that I have enjoyed, I do not take the slightest pleasure in shooting pigs. It is seldom that my forefinger, paralysed by aversion, can be induced to pull the trigger. Should it disgrace itself by such an act, it is only to procure flesh for some section of the people who desire it; unless I am in Asia Minor, where I like it myself, stewed with leeks and onions, or "onions and leeks, stewed with wild boar."

There is one consolation for all who destroy wild hogs—they are working for the public good. It is almost incredible, in certain countries where pigs are numerous, to witness the total destruction of crops committed by these animals. I have seen fields completely turned up as though by some agricultural implement, and actually nothing left; the industry of the cultivator being entirely wasted. Hundreds of wild pigs have been digging during the night in a newly sown field, in search of the grain, which would appear too insignificant for their notice.

Among sugar-plantations they commit terrible havoc, as they bite the canes to obtain the juice. The wounded portion bleeds and ferments, rotting the cane, and damaging the quality of the sugar. In fact, wild pigs may be classed as only second to rats as destroyers of general produce.

I have never seen the wart-hogs of Africa in numbers approaching to the wild hogs of Asia: probably they are kept down by the lions and leopards. The hyænas would destroy the little ones, although no such enemy would presume to attack a boar.

The late Vice-Consul Petherick of Khartoum, who was one of the earliest traders upon the White Nile, was, like all the merchants of the Soudan, a collector of animals for the various Zoological Societies of Europe. Among other beasts that were kept in dens around the large courtyard of the Consulate, all of which were more or less insecure, there were two very large boars, with prodigious tusks. During the night one of these brutes escaped from a sty, surrounded by a wall of only sun-baked bricks. Not satisfied with the simple delights of liberty, it at once attacked one of my people, a Tokroori, who was lying asleep upon his mat. This unfortunate was scored deeply by the tusks in so many places, before the animal could be driven off, that he lay helpless for several weeks afterwards.

A few days after this occurrence, I was sitting, together with Lady Baker, in the large covered

"Rakooba," or raised square, ascended by a broad flight of six or seven steps, when I heard a great noise at the farther end of the courtyard, and I saw the bricks falling from the wall, showing that the boars were once more breaking out. Before the men had time to interfere, the large boar had effected a breach, and it appeared in the courtyard. The people immediately retreated under shelter, but the brute, having surveyed the scene, perceived us sitting above the flight of steps, exactly opposite. Without a moment's hesitation it charged at full speed across the yard, from a distance of about 60 paces. The Rakooba was about 15 feet square, and, as we had lately arrived from Abyssinia, there were numerous trophies of the chase arranged around the pavement; among these were many horns of rhinoceros. Fortunately a long horn weighing about 10 lbs. was close at hand; this I immediately seized with both hands, and was just in time, when the boar was half-way up the steps, to hurl it with all my strength.

It was a lucky shot, the heavy horn struck exactly between the eyes, in the forehead, and knocked the assailant down the steps, at the bottom of which it lay, kicking convulsively, but thoroughly stunned, and unconscious. My men now rushed forward, and we secured the fore and hind legs with ropes, and dragged it to a neighbouring store, the door of which we locked. The remaining boar was not particularly vicious, and we secured it within another sty.

The rhinoceros horn was a formidable weapon, and the effect was highly satisfactory, as the objectionable boar was discovered dead when the door was cautiously opened on the following morning by the men, who were prepared for an attack. I was rather proud of my shot upon this occasion, as I seldom threw a stone at an enemy without hitting a friend by mistake. Some persons are good at one sport, others at another; but throwing a stone to hit the object of aim was never my pride, as I failed in performance. The boar was within 5 feet, which is about my distance for extreme accuracy; even at that short range I should not have sufficient confidence in myself to back my own projectile at long odds, I should only have sufficient good feeling to request my friend, or spectator, to stand well beyond the range of my shot.

CHAPTER XVIII

THE HYÆNA

I HAVE among the "Wild Beasts" to bring in this low-caste creature. It is not worthy of a position among sporting animals, as it is a mere scavenger, useful in its repulsive habits as a four-legged vulture, to remove impurities from the surface. The pig would no doubt indulge in the same propensities, only that, being omnivorous, it is not exclusively a carrion feeder.

There are two varieties of hyæna, the striped and the spotted. The latter is the larger, but both have the same habits.

The bone-cracking power of this animal is very extraordinary. I cannot say that it exceeds the lion and tiger in strength of jaws, but I can safely assert that both those giants of the feline tribe will leave bones unbroken which a hyæna will bite in halves. Its powers of digestion are unlimited; it will swallow a large knuckle-bone without giving it a crunch. It will crack the thigh-bone of a wild buffalo to obtain the marrow, and will swallow either end immediately after.

Natives of all countries despise this animal as the greatest of all cowards, although in some places it is declared that they have been known to carry away children and the calves of cattle. I have been nine years in Africa, but I never actually experienced any attack on the part of these creatures, either against my people or my animals, nevertheless we heard exceptional tales of depredations committed against goats, children, and such harmless young things, that could not defend themselves. I remember once that a hyæna came into our tent at night; but this was merely a friendly reconnaissance, in the hope of securing some delicacy, such as our shoes, or a saddle, or anything that smelt of leather. It was bright moonlight, and the air was calm, there was not a sound to disturb the stillness. I was awakened from sleep by a slight touch upon my sleeve, and my attention was called by my wife to some object that had just quitted our tent.

I took my rifle from beneath the mat upon which I lay, and, after waiting for a few minutes sitting up in bed, I observed a large form standing in the doorway preparatory to entering.

Presently it walked cautiously, until partially within, and immediately fell dead, with a bullet between the eyes. This proved to be a very large hyæna, an old and experienced depredator, as it bore countless scars of encounters with other strong biters of its own race.

Cuvier describes this animal thus: — "The hyænas have three false molars above, and four

below, all conical, blunt, and singularly large; their upper carnivorous tooth has a small tubercle within and in front, but the lower one has none, presenting only two stout cutting points. This powerful armature enables them to crush the bones of the largest prey. Their tongue is rough, exhibiting a circular collection of retroflected spines; all their feet have each but four toes, as in the surikate; and under the anus is a deep and glandular pouch, which led the ancients to believe that these animals were hermaphrodite. . . . Three species are known —the striped hyæna (*H. Vulgaris, Canis hyæna*, L.), found from India to Abyssinia and Senegal; the spotted hyæna (*C. crocuta*, L.), from South Africa; and the woolly hyæna (*H. villora*, Smith), also from South Africa."

I know nothing about the last-named species. Cuvier omits to mention the prodigious muscle which works the lower jaw, without which the crushing power of the teeth would be impossible. An examination of the skull of this animal will exhibit the remarkable size of the aperture through which this muscle passes; it is this which gives the broad and repulsive appearance to the head of the hyæna.

In portions of Abyssinia these creatures are so numerous, that immediately after sundown they visit the outskirts of the towns, in search of any offal or dead animals that may have accumulated during the day. Although the spotted hyæna appears to be the same as that of India, the cry is totally different.

It was the usual occurrence in camp, when we were travelling through the Nile tributaries of Abyssinia, that immediately we had retired within the tent to sleep, after having dined outside, we heard the cracking of bones, all of which had been thrown by the Arab servants only a few feet from our deserted table. The hyænas must have been watching us while at dinner, although themselves unseen, as they came to glean the crumbs almost immediately upon our disappearance. The curious weird howls of these brutes were heard throughout the night close to the tent-door, but they never attacked our goats, neither did we ever lose a fowl through their depredations; they were simply scavengers.

The early traveller James Bruce, who discovered the source of the Blue Nile (1773), had a peculiar respect for hyænas, which he considered to be dangerous. They are so much despised, that during the great hunts of Central Africa, should any of these useful beasts be killed, it is the custom for the women of the village to visit the bodies, and each administers to the carcase one blow with a stick, in derision of the cowardly character it bore when alive.

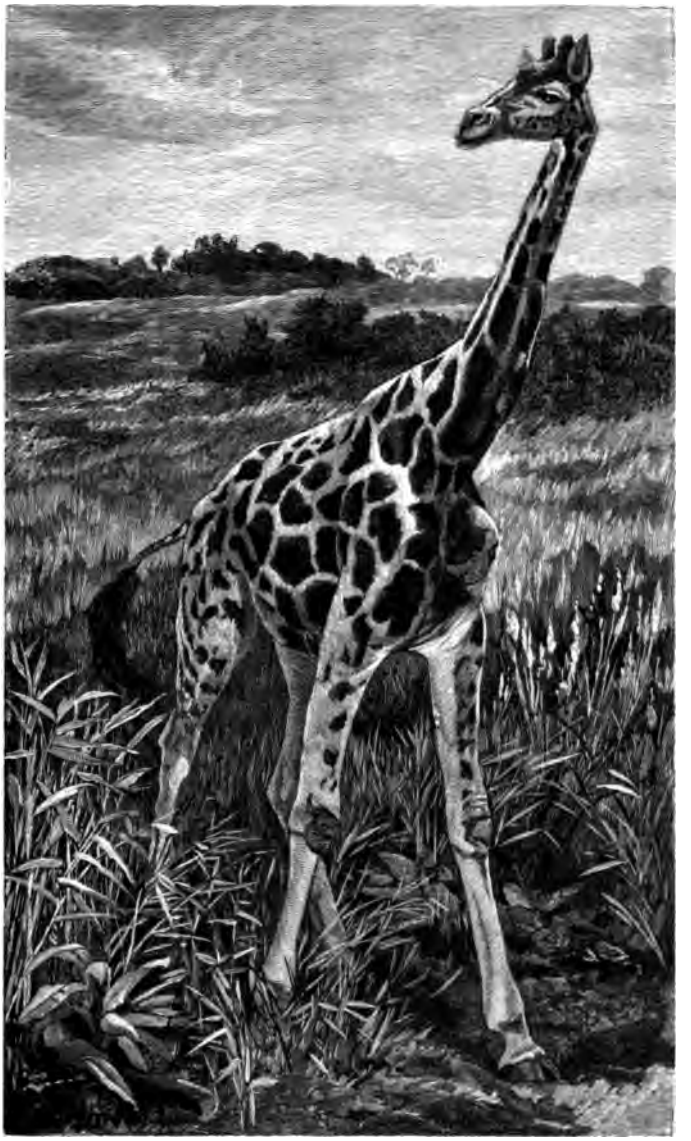
CHAPTER XIX

THE GIRAFFE (*CAMELOPARDALIS*, L.)

THIS beautiful and harmless creature is the tallest of the animal creation. The bull, when standing erect, will measure 19 feet from the crown of the head to the ground in a perpendicular line. The horns are short, and resemble those of the deer when not fully developed, as they are covered with a hairy skin, although hard; these are never shed, but are firmly fixed upon the skull. The giraffe has a long prehensile tongue, which enables it to lay hold of twigs or small succulent shoots, upon which it feeds.

The peculiar length of the fore legs makes it difficult for this animal to graze from the surface of the earth; the elongated neck and prodigious height prove that its natural food is far above the ground; and although it occasionally will eat ordinary herbage, its delight is to feed upon the delicate twigs of the flat-topped mimosas and several other varieties of shrubs.

The pace of the giraffe is peculiar; it moves like a camel, both legs upon the same side simultaneously.



THE GIRAFFE DETECTS AN ENEMY. VOL. II. P. 150.

The long neck swings ungracefully when the animal is in rapid motion, and the clumsy half-canter produces the appearance of lameness. Although inelegant when in action, it is capable of considerable speed, that will test the endurance of the best horses that can be obtained in such countries as it inhabits.

It may be readily imagined that, owing to the great height of this animal, it can be distinguished from a distance, and does not require an elaborate search, nevertheless it is exceedingly deceptive in appearance when found among its native forests.

The red-barked mimosa, which is its favourite food, seldoms grows higher than 14 or 15 feet. Many woods are almost entirely composed of these trees, upon the flat heads of which the giraffe can feed when looking downwards. I have frequently been mistaken when remarking some particular dead tree-stem at a distance, that appeared like a decayed relic of the forest, until upon nearer approach I have been struck by the peculiar inclination of the trunk; suddenly it has started into movement, and disappeared! The giraffe seldom holds itself quite upright, except at such moments when its attention is attracted to some object at a distance.

It is most difficult to approach, as its large eyes, at an elevation of 18 or 19 feet from the surface, embrace an extensive field of vision; but when found in a forest of large trees, it is occasionally met with unexpectedly. The Hamran Arabs invariably

pursue it upon horseback, and hamstring the animal with a stroke of the long straight sword. When dealing with the Arabs in the purchase of horses, they invariably declare that the animal for sale can "overtake a giraffe"; this is the highest commendation.

Riding down a giraffe would be easily accomplished by a good English hunter, but not so easily by the small horses of the Soudan, that are seldom weight-carriers, and are hardly adapted to carry anything above 11 stone over broken ground. There is only one rule for following a giraffe, the horse must be pressed at its best speed from the moment that the animal is sighted. If you allow the game any leisure, it will appear to be going easily, but it will keep up that pace for hours; on the other hand, if you commence with the spur, you obtain a good position early in the race, and you will then be surprised at the speed when you eventually close with your game. Care is necessary to keep a little upon one side, as the giraffe rushes madly through opposing tree-stems and overhanging boughs, which may spring backwards and inflict a serious injury upon horse and rider.

The cloven hoof of a giraffe is a beautiful specimen of horn; it is shaped with extreme elegance, like that of a deer upon a colossal scale. When at full speed over stony ground, the wide-spreading hoofs send showers of pebbles flying backwards, which have been known to injure the hunter when following exactly in the rear: this has given rise to the absurd

belief that "the giraffe pelts its pursuer purposely with stones." Care must also be taken when closing with the animal to avoid its hind legs, as it will kick when least expected, with such force as to upset horse and rider.

The skin of the giraffe is highly prized for shields, as it is much lighter than that of the buffalo or rhinoceros; at the same time it is peculiarly tough, and, when dry, it resists both lance and sword. The Arabs hunt this inoffensive animal expressly for the hide; at the same time, they preserve the flesh by cutting it into thongs and hanging it upon the bushes until thoroughly sun-dried.

The Hamran sword-hunter is a merciless but wonderful horseman, and should three or four of these fellows form a party, they will frequently kill seven or eight giraffes during one hunt. The long and extremely sharp blade is exactly suited to this kind of sport, as the hocks of the giraffe are so high above the ground that they can be reached by the sword without the necessity of stooping. The speed of the horse is naturally imparted to the weapon, therefore when riding alongside, upon the left of the flying animal, the slightest blow will sever the hamstring, and all further movement is impossible. If the giraffe moved like ordinary quadrupeds, it could continue upon three legs, but the fact of its moving the legs of each side simultaneously renders it entirely helpless when one has been disabled.

I have never taken any great pleasure in shooting

giraffes, as they have always appeared to me the most harmless creatures that exist. They never invade the natives' crops, neither do they attack any animals, or man, but they simply enjoy themselves in their harmless manner, their only enemies being the lion and human beings.

It is a curiously beautiful picture when a large herd of these animals is seen upon bright green pasture, among dwarf-mimosas and other small bushes, which, through contrast, enhance the great height of the giraffes. I once counted one hundred and fifty-four, all of which were within the area of 3 or 4 acres. I made a successful stalk, and killed two by a right and left shot. One had a broken shoulder, and was quite incapable of any movement, beyond the slowest attempt at hobbling. I have never pursued them except upon occasions when my people were devoid of meat, as the destruction of such lovely creatures without some necessary purpose I regarded as wanton cruelty.

The eye of the giraffe is worth special study, as there is nothing to compare with its beauty throughout the animal creation.

Although some naturalists have termed the giraffe "a modified deer," I cannot accept the definition, as there is nothing relating to the deer, excepting the peculiarity of the horns, which have a somewhat remote resemblance to those of a young stag. The deer has a short tail, while that of the giraffe is long, and fringed with so important a garniture of black hairs that it is in request for whisking away the attacks of

flies. The deer moves its legs like other quadrupeds, while the action of a giraffe resembles that of the camel.. The general figure in no way approaches that of any other animal, and I regard the giraffe as a creature entirely separated from all others.

CHAPTER XX

THE ANTELOPE

THERE is no animal that belongs to the *Cervidæ* south of the Sahara desert; the deer of Barbary is supposed to have been introduced from Europe, possibly by the Carthaginians; at any rate, there are no deer throughout the vast continent of Africa, excepting the Northern States which border the Mediterranean. This is a peculiar feature in the African fauna, the deer being common to all other portions of the globe. In Africa, in the absence of deer, we find an extraordinary variety of the antelopes.

The antelopes, although possessing many of the characteristics of deer, have a distinguishing feature in the permanency of their horns; these grow like those of the Bos, in proportion to the age of the animal. There is an extraordinary variation in both shape and length, according to the species, also in the distribution of horns among the sexes; in some antelopes the horns are confined to the male, while in other varieties both the male and female are thus armed.

Although Africa takes precedence for size and variety of species, the antelope is found in different portions of the world, in smaller numbers, but in most instances distinct examples. In North America the well-known antelope of the prairies is totally unlike all others in the peculiar position of the horns; these are prong-shaped, slightly palmated, and are fitted at right angles with the flat top of the skull, starting from exactly above the orbit of the eye, which forms the base. This animal (*A. furcifera*) is quite unlike all other antelopes, in shedding the sheath of its horns annually. This species was to be found in enormous numbers at the commencement of this century, and even now, owing to its natural vigilance, it has escaped the general destruction of wild game. The live weight is about 90 lbs., and the flesh is excellent. The females are devoid of horns.

There is a second variety in Canada, but I have never met with it.

The chamois represents the European antelope (*Rupicapra tragus*). There is also a second variety in Russia (the *Antilope saiga*).

We thus discover the extreme paucity of varieties in cool temperatures, which suggests that the antelope is an animal better suited for tropical or sub-tropical climates, in which it becomes thoroughly developed.

In India we find one variety of large size, the nilghye (*Portax picta*). This is a curious animal,

as it carries extremely short horns, seldom more than 8 inches in length, although it attains the large size of 600 lbs. live weight. The bull is a bluish gray, very high in the withers, and deep in the chest; the female is devoid of horns, and is smaller, also different in colour, being a russet brown. There is a strong resemblance to domestic cattle in the nilghye, but the animal is shy, and, in my own experience, I have found it more difficult to approach than the sambur deer. All antelopes have a peculiar arrangement below the eyes, a sort of pit, in connection with the lachrymal duct.

In some parts of India the nilghye commit great havoc during their nightly depredations upon the natives' crops, but the Hindoos will seldom destroy them, as they regard them in the same light as cows, the name signifying "blue cow." All the horns of antelopes are sheaths fitted upon a bony cone. I cannot see much difference between the gazelle (*A. dorcas*) of Africa and Arabia, and the chicara of India. They are graceful creatures, which generally inhabit extensive plains, and are difficult to approach. I do not pretend to give a description of every variety of antelope; there are several in Northern India and Thibet, also the four-horned antelope (*Tetracerus quadricornis*). This is a curious little animal with four short spike horns; the two anterior are seldom more than 2 inches in length, and the posterior, which are immediately behind, do not exceed 4 inches. The four-horned antelope is

BLACK-BUCK—THE START. VOL. II. P. 159.

not gregarious, but is found either singly or in pairs, generally in high grass, where they lie close until disturbed by the elephant, which almost treads upon them before they can be induced to move. They dash off at full speed, and from the howdah they are difficult to hit with a rifle. A Paradox gun with one barrel loaded with ball, while the other contains a charge of buck-shot, is an excellent weapon where small deer are objects of the day's sport.

The antelope *par excellence* of India is the well-known black-buck (*Antilope cervicapra*). This is without exception the most graceful and sporting animal of the tribe. In some portions of India it is exceedingly numerous, while in other parts it is so extremely rare that it cannot be classed among the fauna of the district.

This animal is gregarious, and is generally seen in herds of twenty or thirty individuals. It inhabits vast plains and infests the crops of the natives, especially when the young wheat is about 9 inches high. I have seen exceptional herds, comprising several hundred individuals, but it is seldom that they are met with in such great numbers united, although many hundreds may be scattered in small groups over the area of a few square miles.

There is nothing more lovely than a fine black-buck about eight years old, when the coat looks as black as pitch, contrasted with the snow-white markings of the belly, face, and throat. The

females are a rich yellowish brown, with white thighs and bellies; these never change their colour, and they are devoid of horns. The males require three years for the skin to darken, and it is of common occurrence to find a buck with horns of 20 inches in length, although it has not commenced to assume the jet-black coat. I do not think they are really and thoroughly black until they are six years old. The hide darkens by degrees, and in a herd of twenty animals there will probably be several bucks of different gradations, but only one that has attained the maximum of colour; this will be without exception the "master-buck" which dominates the herd. This little lord of his small court enforces a thorough discipline, and when the young bucks, in the presumption of youth and good looks, pay too much devotion to the fair sex of the party, it is a pretty sight to see the master-buck, with horns thrown back and nose in air, curling his upper lip in high disdain, as he prepares to chastise the sinning youngster for his audacity. After stepping proudly around the does, as though warning them against the feminine weakness for admiration, he makes a savage onset upon the love-sick buck, prods him with his spear-pointed horns, and drives him ignominiously from the herd. He then returns proudly to his ladies, marches alongside each of the younger bucks, as though to caution them, by the recent example, against any excess of devotion to the does.

This seems to be the all-absorbing employment of the master-buck, to preserve order and to support his conjugal rights in a limited society of about twenty lovely females and five or six young aspirants of various ages.

In other herds there may be two or three thoroughly black bucks, in which case the personal combats are both fierce and frequent. They are highly pugnacious, and I have frequently obtained a shot when two old bucks have been so closely engaged in their duel that, although the herd had fled, they were too much occupied to notice my appearance.

The live weight of an average buck is about 85 lbs. It is difficult to give an average of horns, as they vary in different districts and animals. I have heard of horns that were 28 inches in direct length measured from point to base, but I have never shot them longer than 23½. I should say a length of 19 inches would be a fair average. They are most regularly spiral, and to be good specimens they should be exactly alike in length and inclination from the base.

In the description of the hunting leopard (*Felis jubata*) I have already given an account of the speed of the black-buck; there is nothing more interesting than to watch the habits and the movements of these graceful animals through powerful binocular glasses, which upon an open plain permit you to examine them as though in the centre of the herd.

If there is a public road through the cultivated fields upon which these antelopes love to graze, you may sometimes pass them within 100 yards, provided that you are either riding or driving; but if on foot, they will not permit a near approach, although they will take but little heed of ordinary natives. They are afraid of elephants, and will seldom allow them to come within 200 paces; the only method by which you can obtain an ordinary range is by stalking them with a horse or trained ox, or by following behind a bullock-cart such as the natives use upon their farms.

The most favourable ground for black-buck is a mixture of great cultivated flats, with neighbouring tracts of wilderness, where low hills, broken ground, and thick bush afford a sanctuary for their retreat, and for the rearing of their young.

A few shots fired upon a vast area of young wheat will soon scare the animals from the locality, and should there be no jungle, or hills within several miles, they will disappear entirely.

If there is an extensive area of rough jungle to which they can retire, you may sometimes obtain good shots by stalking carefully up wind, as the animal may be discovered beneath the imaginary security of the bushes; but even then the greatest caution must be observed, as the game is always on the alert.

When, upon the open plain, the black-buck has arrived at the conclusion to retreat, the sight is most interesting, as the speed and agility of the animal are

at once displayed to the fullest extent. The females of the herd trot off for a few yards, and then usually halt to reconnoitre. The bucks separate, and all turn round to gaze at the object of disturbance. Having made up their minds to go, there is no more hesitation, but away and away they fly, hardly touching the ground with their swift hoofs, but hopping almost vertically in the air, and bounding at least 6 feet in perpendicular height at each leap, as they follow each other at 50 miles an hour across the level plain. I believe that they are capable of the extraordinary speed of 60 miles an hour, as it is said that the best English greyhound cannot overtake them.

It is difficult to give an opinion without having tried the experiment. Although I have frequently had the advantage of excellent native dogs for my assistance in following wounded buck, I have never seen a fair trial with greyhounds. It would be difficult to find a locality that would permit the greyhound a fair use of its powers, as the dog requires not only a level but a smooth surface to exert its maximum speed. In India the land is very roughly ploughed, and is never harrowed. When the wheat is growing, the surface is a mass of large clods the size of a man's head; these have been exposed to the sun until they have become as hard as sun-burnt bricks. The black-buck is at home upon this uneven ground, but the greyhound could not use its feet with full effect. The greyhounds in the Soudan are well known to overtake the gazelle, if they can

obtain a fair start, and I should certainly imagine that a first-class greyhound would catch a black-buck if it could be slipped within 100 yards upon a level uncultivated plain, where the surface was absolutely smooth.

A couple of years ago, when I was in the district of Damoh, where black-buck were plentiful, I procured two excellent dogs from the village of Bertulla. My first introduction to them was accidental. Our camp was pitched upon the raised bank or bhund of a tank which adjoined the village. Upon this were several fine tamarind trees which shaded the tents, also a large peepul (*Ficus religiosa*), from the centre of which a wild date-palm grew like the mast of a ship for about 40 feet in height, its spreading crown appearing like a plume of feathers above the highest branches of the peepul. From our rather elevated position we had an extensive view of the slightly undulating surface, and upon a rough uncultivated slope about half a mile distant I observed a very black buck lying down alone. It is easier to approach a solitary buck than when surrounded by a herd, and I commenced a stalk, walking behind a bullock-cart, driven by one of my men who understood the work.

It is high art to conduct the cart properly. Bullocks are awkward animals to drive, and they will not go in the required direction without considerable trouble. The driver has a tolerably easy time if the cart forms one of a train along a good highway; in that case the bullocks will follow

the line of route to the tune of their jingling bells, but once off the road, and stalking black-buck, when constant halts and turns are necessary, according to the changing position of the game, a driver of a bullock-waggon has enough to do.

He drives his sharp-pointed stick into the hind-quarters of one, then twists the tail of its companion till it is nearly fractured at a joint, then tickles them both simultaneously by dexterously driving his naked feet beneath their tails, as he sits upon the front bar of his cart, and indulges in ceaseless jerks and spasms. All these movements are really necessary to impel the bullocks, but they are much against success when the greatest quiet should be observed. In the meantime you walk either exactly behind or upon one side of the sheltering cart, ready with your rifle for a shot at 100 yards, which, if the cart is well managed, you should obtain, unless the black-buck have been much disturbed.

In this manner we succeeded in approaching the recumbent buck to within 150 yards, before it rose lazily from the ground and regarded us with some astonishment. The cart-driver turned immediately towards the right, as though his intention was to leave it unmolested on our left.

The buck evidently believed in our innocence. After a half-minute he again altered the course to our left to regain lost ground, and by careful judgment we presently found ourselves about 110 yards from the buck, which was standing up regarding our bullocks with some curiosity.

I now halted to fire, while the cart turned slightly to the right but did not stop. This should always be observed, as, should the bullocks halt for one instant, the buck would be off directly; the cart should pass slowly forward, leaving the shooter standing or kneeling behind, as he may prefer.

I had a ·360 rabbit rifle, and as the buck faced me I fired a little too low, and broke its fore leg just below the chest. For a moment it fell, and I thought it was secure, but almost immediately it recovered, and running down a gentle incline, it crossed a small stream at the bottom, ascended the rough slope of rank grass upon the other side, and remained standing upon the side of this rising ground at about 200 yards' distance. I had reloaded, and not being aware of the nature of the wound beyond the broken leg or shoulder, I waited in the expectation that it would presently lie down. To my surprise, two dogs suddenly rushed past me; they had heard the shot, and had seen that the buck was wounded, but I have no idea where they were at the time, unless with the cattle in the distance. They crossed the stream at full speed, rushed up the slope through grass about 2 feet high, upon the blood-track, and the buck, which was still in the same position, did not observe them until they appeared in full attack within 30 paces. Away it flew upon the instant! The chase commenced, and although the poor buck had only three useful legs, it kept well ahead and appeared to gain upon the dogs for the first 150 yards, but unfortunately for itself

there were some acres of irrigated land, and this being soft, although apparently sound turf, the buck was at a disadvantage. The dogs did not sink in the treacherous soil, and after a short run they closed, and at once pulled the buck upon the ground.

Some natives who had been watching me observed the hunt, and they came from the direction of the village, running like so many hounds; but no sooner did they arrive upon the scene than they commenced hammering the good dogs with their heavy bamboos as though they intended to kill them on the spot. It was with some difficulty that I stopped them; but in spite of the assault the plucky dogs had not relaxed their hold, and they gripped the throat of the buck with determined fury. After some trouble the natives choked them off; but again and again they returned to the attack, exhibiting a savage nature that I foresaw would make them invaluable allies.

I hired both these dogs, together with their owners. They were a cross between the ordinary native dog and the large breed which is known as belonging to the Bandjarahs. The latter is a tribe somewhat similar to the gypsies of Eastern Europe. These people are hereditary carriers, and travel enormous distances, conveying the various productions of India to the different commercial centres, upon pack oxen. They are accompanied by a peculiar breed of dogs, large and fierce, which guard their animals during the night's bivouac.

The two dogs which I engaged were Cabré and Mora.

Cabré was only twelve months old; he was a black dog, with smooth hair. Mora was the same colour, but rather long in the coat. Both were about 26 inches at the shoulder. These animals became my staunch companions, although Cabré never took to Europeans; he did not exhibit the slightest regard for myself personally, but he was enthusiastic in sport, and the report of the rifle was quite sufficient to awaken the keenest delight, as he knew that some animal was either killed or wounded. Mora, on the contrary, was affectionate, although savage to a degree when game was to be attacked.

I once broke the fore leg of a fine old buck at a long shot, and it went across country as though untouched, the bone being fractured just above the knee. Cabré was with me alone, and he ran that buck single-handed for upwards of 3 miles. We had lost both antelope and dog, and I followed upon a fast elephant, inquiring of every native whom we met working in the fields whether he had seen anything of the hunt. Every man told the same story; he had seen a buck followed by a dog, and they had taken a certain direction, which was pointed out. At length, after a long search upon a boundless plain of cultivated ground, bright green with young wheat about 6 inches high, I made out

with the binocular glasses a small knot of people, with a dog following behind.

Upon our arrival we found a number of natives carrying a black-buck slung upon a long pole, all four legs being lashed together, and behind the little crowd was our dog Cabré, who had run the buck down single-handed and seized it in a nullah, close to a village. The natives had secured it, and were bringing it in triumph to my camp, a distance of 3 miles. The buck was still alive, as these people, being Hindoos, had declined to kill it. This was one of Cabré's early performances; after which he quickly became distinguished.

The antelopes are all more or less bullet-despisers; if they are not struck in the right place, they exhibit a wonderful tenacity of purpose and of life; but the black-buck is exceedingly difficult to kill with certainty. If there is any covert within reach, it will attain the shelter, to die a miserable death, unless it is shot through the lungs, heart, or neck. It is a small animal, and, being wary, it is seldom that a shot is obtained within 100 or 120 yards. The mark, to be fatal, will be limited to 3 inches square, or at the outside 4 inches. Distance upon a flat plain is deceptive, therefore it is necessary to possess a small-bore Express of the highest velocity to ensure a flat trajectory. In my opinion a ·400 bore with 4 drams of powder is the best rifle for this sport. This is the only

case in which I recommend an expanding bullet. The long projectile of the ·400 should have a very shallow hollow ¼ inch at the point, and only ⅛ inch in diameter. As the bullet will be 1¼ inch in length, it will not smash up into films or shreds, but, if composed of pure lead, it will flatten out at the point for about half an inch, and form a mushroom head, that will prevent it from passing through the body, and perhaps ricochetting into some village a mile on the other side.

At Bertulla, where we were camped for some time, the village was benefited by the presence of a Hindoo priest. This fellow was an extraordinary personage, as he combined the ascetic with the acrobat. Naked, with the exception of the smallest waist-cloth, he was smeared from head to foot with ashes: his begrimed face had the unearthly appearance produced by this ghastly colouring, and his large eyes shone with that peculiar brilliancy which may be so frequently remarked among the religious enthusiasts of India. This holy man was an important personage at Bertulla, as he possessed a small temple upon the outskirts of the village, which represented all that was ecclesiastical in this portion of the district. The temple, or church, was about 8 feet square, therefore it was somewhat limited in accommodation; it was glaringly white, with a small shrine, painted with divinities, which appeared to be in an advanced stage of scarlet fever.

The signal for divine service was given upon a species of trumpet, which emitted a weird sound, happily unlike any other instrument to which we are obliged to listen. This high priest was the sole representative of the little temple, and he led a solitary life; his chief occupation consisted in sweeping his small courtyard and brushing up his premises. He had no dwelling, neither did he sleep upon a bedstead, nor even upon the ground, but he laid himself upon a horizontal bar like the pole of a bullock-cart, supported upon posts about 3 feet above the courtyard floor. A short cross-piece at one end was sufficient for his shoulders, and upon this uncomfortable perch he was able to pass the night in rest.

We became great friends, as I frequently gave him presents for his temple. I am fond of clergymen generally, as they are never shy in accepting donations for their parishes. My interpreter described this faky as "a sort of Bishop"; he accordingly became known by that name in camp. The Bishop would have been known in England as "a sporting parson." Although a devout man, he was a sportsman at heart. The tank abounded with wild-fowl, and I was accustomed to supply sufficient ducks and teal for our entire party almost daily. Upon these occasions I was invariably attended by the Bishop, who plunged into the water like a retriever to secure the birds when either killed or wounded. This cleansing

process effected a sudden change in his appearance; the ash-smeared faky became a really handsome man when divested of his holy colouring. I had presented him upon one occasion with a few rupees to beautify his church, and he became more grateful than a member of the Established Church would have been under similar circumstances. He exhibited his gratitude by a voluntary exhibition of his powers as an acrobat, leaping to a great height, and turning somersaults, for which performance his dress was admirably adapted, as he had nothing on but ashes. He then walked upon his hands, head downwards, doubled himself together with his arms beneath his legs, and hopped like a frog; until he wound up the entertainment by balancing himself upon his nose on the hard ground — a feat that would have been highly remunerative at the close of a charity sermon in London.

Our "Bishop" was of considerable service during a memorable hunt. I had wounded a very fine black-buck, which made off across the open country. Although it had a long start, I had slipped the dog Cabré immediately, and we had a glorious chase straight across the level ground, the young wheat being about 8 inches high.

I was on a fast elephant, therefore we managed to keep the animals in view. All the villagers turned out to see the fun; the natives who were travelling along the road put down

their bundles and enjoyed the scene; people who were working in the fields rushed after the dog, others cut across and endeavoured to turn the buck. Thus hard pressed, the buck altered its course, and having passed the village, it turned to the left, disappearing from my view. We hurried the elephant along at about 8 miles an hour, as I felt sure the buck would either run directly through our camp upon the bhund, or it must take to water, as it would be intercepted by the lake. The dog was about 100 yards in the rear, running beautifully.

We turned the corner, passed the village, and almost immediately we saw a crowd, in the middle of which was the Bishop, holding the buck by the horns, in spite of its frantic struggles to escape. It appeared that the animal at full speed was passing by his temple directly towards the lake, and the acrobatic parson, with extraordinary agility, sprang across its path and seized it by the horns. They had the greatest difficulty in restraining the dog, which upon arrival immediately pinned the struggling buck by the throat, but was cruelly beaten off with bamboos by the excited crowd.

Much might be written upon the black-buck, as it is the prettiest animal in India, and without any exception it affords the best sport to a lover of the rifle, but there would be a monotony in the description. I shall therefore close this chapter, and devote the next to the more important antelopes of Africa.

CHAPTER XXI

AFRICAN ANTELOPES (*A. BUBALIS*)

THIS interesting tribe inhabits more or less every part of Africa. There are varieties which differ in their habits so completely that it appears impossible to accept them as belonging to the same genus, nevertheless they are all antelopes, the distinction of the class consisting in the formation of the horns, and the tear-ducts beneath the eyes. As before mentioned, the horns of antelopes differ entirely from those of deer, as they resemble those of oxen, which are mere sheaths that fit upon a conical bony projection, and are permanent.

The difference in size is very marked, varying from the tiny oom dik-dik (*Hemprichianus*), which weighs about 16 lbs., to the roan antelope, and the still heavier eland (*Boselaphus oreas*), that would weigh 900 or 1000 lbs.

The most common of the larger antelopes is the bubalis, known by the Arabs as the tétel and at the Cape as the "hartebeest."

There are two varieties of this animal, specially distinguished by the horns. In Abyssinia these

ANTILOPE BUBALIS (HARTEBEEST). VOL. II. P. 174.

are spreading, and the similarity to those of the buffalo is at once perceived, but in Central Africa the horns are closer together, more upright, and generally more massive in the base.

The head of the *A. bubalis* is very extraordinary in shape; the skull rises about 4 inches above the brain cavity, and the horns are rooted upon this projection. If the entire head is not required as a trophy, this portion may be sawn off without disturbing the position of the horns, or in any way interfering with the actual cranium. The horns appear to be carefully arranged for defence, as they rise almost perpendicular with the skull for about a foot, and then turn back for 7 or 8 inches, terminating in extremely sharp points. When the head is lowered to receive an attack, these points are presented to the enemy, and a sudden lift would be certain to impale.

The colour of the skin is a beautiful chestnut, inclining to red; the texture of the coat is exceedingly fine, and in the bright sunlight it glistens like that of a well-groomed hunter.

Although the live weight of this animal would exceed 560 lbs., it is one of the fastest antelopes, and is more difficult to overtake than any other. In fact, I have never seen a horse that has been able to run down a tétel, and the Hamran Arabs would not as a rule attempt the chase. I have ridden after them on several occasions upon a good horse, and I have imagined that I gained upon the herd, but when within about 100 yards

they seemed to be aware of the danger of a close approach, and, without any apparent effort, they kept the horse at its maximum speed.

They are, as the Dutch name implies, "hard beasts," and require correct practice with the rifle. Unless shot in a vital place they will travel for an unlimited distance, and will seldom be recovered. As the colour is bright, they are readily distinguished among the green foliage, and upon open ground they can be seen at a great distance.

Like many others of their tribe, they are difficult to approach, and they generally place a sentry upon some favourable position, that will command a distant view. The white ant hills in Central Africa are very numerous, and being 5 or 6 feet above the surface, they afford admirable watch-towers, upon which the sentry generally takes his stand, while the herd grazes in security in the immediate neighbourhood.

The tétel feeds principally upon grass, but it is attracted by the tender young shoots of the various mimosas at the commencement of the rainy season.

The distressing months, when a continuance of rain has encouraged a giant growth of herbage, cannot be appreciated by those who have not experienced the block of vegetation. The entire country becomes impassable, being clothed in a dense mass of coarse grass from 8 to 10 feet high. By degrees this ripens, and when the dry weather has continued for two or three months, it becomes

highly inflammable, and is fired in all directions by the inhabitants. When a strong north wind is blowing, the sight is most impressive, as nothing appears to check the flames. The fire rushes onward with wild delight, crackling the hollow canes, licking the dried leaves off lofty branches, and roaring like a heavy gale as it drives forward in its destructive course, leaving the blackened ground behind as clean as a velvet pall.

An immense extent of country may be cleared within a few days, if the grass is carefully ignited to windward, and it is a mystery how the wild animals arrange their retreat before the annual conflagration. I imagine that they are well aware of certain places of refuge in the dry beds of rivers, where the experience of the past has assured them of security. At any rate, they save themselves, and reappear upon the scene within a very few days after the fire has destroyed all pasturage. This is the time for the hunter, as all animals are driven to the broad beds of streams, where green herbage is always to be found throughout the driest months. The borders of such rivers are generally fringed with nabbuk, and the antelopes are attracted by the small fruit, like miniature apples, which fall to the ground in quantities.

By degrees the wind cleans the ashes from the surface, and although the jungles are in a leafless condition, as bare as our English woods in winter, a change takes place. The different

gum-bearing mimosas, that have been scorched by the recent fire, exude their sap through the heat-contracted bark. There are several varieties which produce gum-arabic, but the most valuable is that of a tree which is armed with a double-hooked thorn in reverse. It is simply impossible to escape without assistance when caught in this entanglement, if your clothes are strong enough to hold without giving way.

The best gum-arabic is found in Kordofan; also in the country from the base of the Abyssinian range of mountains to the river Atbara. In some portions of this extensive district, where the best quality is produced in quantities, there are no inhabitants to gather it, as there is a considerable area uninhabited, owing to the insecurity of life in the absence of a firm government. I have seen crops of this valuable gum in such profusion that the naked trees were ornamented with transparent fruits resembling small candied oranges. These were semi-transparent, adhering to the stems and branches, so brilliant in their golden frosty surface that they became most attractive; I could not help dismounting, and collecting as much as I could carry. It has frequently occurred to me, when among such scenes, that the old story of the garden of jewels in *Aladdin and the Wonderful Lamp* originated in travellers' accounts concerning the mimosas laden with this topaz-coloured gum.

It is sweet and agreeable to the taste when

freshly gathered from the tree; the outside is hard, but the centre contains liquid gum, which would become hard in the course of time. If the round lumps, resembling Mandarin oranges, are packed together, they become exceedingly dry and brittle, losing their shape, and crumbling into small pieces, such as arrive in England under the well-known name of "gum-arabic."

Almost all wild animals are attracted by this gum when, in the driest season, the mimosas are in full bearing. The dog-faced baboons (*Cynocephalus*) may be seen in large troops, all bent upon the gum-collecting industry. With the order of human beings they march along, the females carrying their young upon their backs, until some well-furnished trees are sighted. A rush takes place immediately by the ten-year-old boys, or young baboons equivalent to that human age, but the arrival of some old grandfathers in the shape of well-maned males, who cuff them right and left, restores immediate discipline, and all the party resolve themselves into groups around the well-laden trees, filling their stomachs, and distending their pouches with the bon-bons of the wilderness.

The antelopes are particularly fond of this gum, and they are sure to be found in the neighbourhood of this species of mimosa.

The hide of the tétel or hartebeest is much prized by the Arabs, as the toughest and most durable leather when tanned. Large sacks are

manufactured by the simple process of stripping off the skin in one piece, like a stocking from the leg. This is tanned, and the apertures at the four legs, and the neck, and hind-quarters being sewn up, the entire skin forms a bag; in this, corn is conveyed to market.

I have killed great numbers of these animals both in Abyssinia and Central Africa; they have invariably yielded good sport, requiring careful stalking and accurate rifle-practice. Both males and females are furnished with horns.

There is a species (*Damalis Senegalensis*) which somewhat resembles the bubalis. This is not an inhabitant of Abyssinia, but it is not uncommon in Central Africa. The size is slightly inferior to the latter, but the habits are the same. The horns are differently shaped, being annular, and retiring slightly backwards. In like manner with the bubalis, both sexes have horns. The colour of this variety is a very dark chestnut, with black thighs and fore legs. The flesh is superior to that of all other antelopes.

This species invariably posts a sentry to guard the herd when feeding, and it was always my ambition to stalk the guard and knock him off his stand, instead of attempting a shot at the less suspicious herd. Upon several occasions I have succeeded where the white ant hills were sufficiently numerous to afford cover for a stealthy advance.

The handsomest of all the larger antelopes is

the koodoo, or nellut of the Arabs (*A. strepsiceros*). This animal is most graceful, and is prettily marked. It stands from about 13 to 13½ hands in height of withers. The colour is mouse-gray, with perfectly white stripes. The horns are very long and spiral. In this species we find a distinction in the female being devoid of horns. Their habits are different from the foregoing varieties, as they are seldom met with upon the open, but are found in deep ravines and thickly wooded nullahs.

There are no elands in Abyssinia, neither have I ever seen them throughout my journeys in Central Africa, but I have seen a very large pair of horns that were brought by the slave-hunters from the West, somewhere upon the Bahr Gazal.

The largest of all that I have met north of the equator is a species of roan antelope that was named *Hippotragus Bakerii*, as a new specimen, differing from the well-known roan antelope of South Africa. This animal stands about 13 hands 3 inches at the withers, or 14 hands; it is immensely bulky, and clumsy in comparison with the more elegant *strepsiceros*. The horns are thick, annulated, and are curved completely backwards, so that when the head is thrown up they would reach the shoulder. The mane upon the neck gives it a remote resemblance to a horse, with horns. I have never weighed a roan antelope, but I should estimate the live weight at about 700 lbs. Both male and

female have horns, those of the male being superior.

I saw this species for the first time near the Bahr Salaam in Abyssinia, also subsequently upon the border of the Settite river. In portions of Central Africa they are more plentiful, but they are not so generally distributed as the bubalis or *strepsiceros.*

A very handsome variety of the large antelopes is the water-buck or mèhèdéhet (*A. ellipsiprymna*). This is an exceedingly massive animal, nearly allied to the red-deer in colour and texture of hair. It weighs about 600 lbs. when alive. The dark-brown hair of the throat is coarse, and somewhat shaggy in the males; the horns are long, distinctly annulated, and after turning slightly backwards, the extremities project forward in a gentle curve. The flesh of this variety is coarse, and although eaten, it is not esteemed, even by the Arabs.

As the name "water-buck" would imply, this species is found in the neighbourhood of swamps and rivers. A fine old male is a grand-looking creature, resembling a German stag with a winter coat, surmounted by large horns of goat-like appearance. The females are devoid of horns, and they look at a distance exactly like the hinds of red-deer, or sambur.

I have shot a great number of these animals, as I have been compelled during many years to depend upon the rifle for a supply of food, not

only for myself, but for a large number of followers. There is no superiority of sport in this variety, but I cannot help recalling to remembrance a particular occasion when I nearly lost a fine male through the want of penetration of the bullet.

The flotilla of fifty-seven vessels was toiling along the adverse current of the White Nile, and, according to the varying energies of officers and crews, the ships occupied positions either in advance or rear, straggling throughout a course of many miles.

As my vessel led the way, we moored alongside the bank one afternoon, where an extensive flat of perhaps a thousand acres stretched from the water's edge to the base of low wooded hills which formed a range, increasing in height as they stretched into the interior. It was a pretty bit of country after the interminable swamps of the White Nile, through which we had been so long in passing, therefore I landed, with my rifle, accompanied by my chief engineer, Mr. Higginbotham, and Lieut. Baker, R.N.

We had walked through the wooded hills for a considerable distance without firing a shot, although game had several times been moved, when, upon descending to the lower ground, *en route* to our vessel, we observed three large bull mèhèdéhets feeding in the open plain, directly in the path that we were about to take. There was very little chance of obtaining a shot

upon the exposed ground; I therefore begged my two companions to wait, while I should endeavour quite alone to stalk the game.

There were several large isolated trees growing in the marsh outside the jungle, at the base of the rising ground from which I now descended. I endeavoured to estimate the distance, which I computed to be about 220 yards from the farthest tree to the nearest of the animals.

The difficulty would be to arrive at this tree without being perceived by the mèhèdéhets, as they were somewhat scattered. Had there been only one, I might have advanced under cover of the tree by keeping the thick trunk in a direct line with my approach. At length, by dint of perseverance, sometimes crawling along the rutty surface, then lying flat to conceal myself in the grass about 18 inches high, whenever there was a danger of being observed, I managed at last to reach the farthest tree. I rested there for several minutes to become cool, and to wipe my eyes from the streams of perspiration, which nearly blinded me. At length I was cool enough to take the trial shot. The distance was a little over 200 yards. Taking a rest against the stem of a giant tree, I fired. The bull fell as though struck by lightning. His more distant companion went off at full speed, and was soon lost to view; but his nearest neighbour simply started for a few yards, and after having regarded the situation without discovering any

enemy, he turned round with astonishment to inspect his fallen friend. This turned the broadside towards me, and again I fired. If a sledge-hammer had struck the skull, the animal could not have succumbed more suddenly. This had a very pretty effect at so long a distance, as the right and left had been fired within about ten seconds, and both of these fine bulls lay stretched upon the ground.

I never like to see an animal fall apparently stone dead without the slightest struggle, as it is generally paralysed for the moment, but quickly recovers, and escapes: I accordingly ran towards the spot, and immediately perceived Julian Baker and Higginbotham racing across the rutty ground, hurrying to the scene. We soon met. The first buck was shot through the centre of the shoulder: had he been a target, the bullet would have made a bull's-eye. We went a few paces to the right to examine the last shot. I had missed the shoulder, and the bullet had struck the middle of the neck. We were standing together, admiring the massive proportions of this fine water-buck, when, without the slightest warning or preparatory struggle, it jumped up and started off at full gallop. In another second it dropped dead, with a bullet in the back of the neck, as fortunately I had reloaded.

This was a curious example of an instantaneous recovery from the stunning effect of a shot in the neck. My rifle was a wonderfully accurate weapon, but it was in the early days of breechloaders, and

although ·577, it carried the Snider hollow bullet and 2½ drams of powder. This had no penetration, and animals that were well hit were continually escaping, which would not have been the case with a larger charge and a solid bullet. In this instance the bullet had struck the spine, but had not sufficient power to break the bone, after passing through the hard muscles and tough hide of the water-buck at a distance of about 220 paces.

Two of these splendid animals formed a welcome addition to the hard fare of the expedition, and they were quickly divided among the men.

There is an antelope in the marshy country of the White Nile which I have never met with elsewhere. This is rather larger than an ordinary donkey; a jet-black colour, with a patch of pure white across the withers. The crown of the head is white, also a white ring around the eyes; the chest is black, but the belly is white throughout.[1] The horns of this species are from about 28 to 32 inches in length, and they bend backwards in a peculiarly graceful curve, unlike any other antelope. The coat is rather coarse and long, approaching that of a goat. The coat of all antelopes that frequent marshes and the neighbourhood of water is more or less coarse; this is very marked in the *ellipsiprymna*.

I have before remarked that animals and birds vary in their degrees of shyness and difficulty of

[1] This is the *Kobus Maria* of Gray, or *Megaceros* of Heuglin.

ANTILOPE SCRIPTA (HARNESSED A.) VOL. II. P. 187.

approach. The *megaceros* is easier to stalk than any other antelope that I have met; and upon one occasion I stopped our vessel and landed, where I saw a number of these animals upon the half-dried marshes. In the course of the afternoon I bagged five, affording a grand supply for my hungry people. The females of this species are a brown colour, and devoid of horns. I have never seen this antelope inland, but always in the close vicinity of rivers and lakes; they are generally in large herds, and can only be discovered at the driest season, when the rivers have sunk low, and the marshes, which are inundated during the rainy months, have become exposed and hardened by the sun. It is difficult to estimate the number of animals in a herd, but I have occasionally seen this species in dense masses that would contain a thousand. The pallah (*A. leucotis*) is another antelope that is found in important herds. This is very common in Central Africa, and affords excellent sport, and good food for the camp. It is a well-known antelope both in South and Central Africa, but I have never met with it north of 10° N. latitude. The horns of the male are prettily shaped, something like the gazelle, but spreading. The females have no horns, but they are nearly the same colour as the male, a yellow body with snow-white belly. The size of the pallah is about the same as a fallow-deer.

The prettiest creature of the jungles is the harnessed antelope (*A. scripta*). This is never found in herds, but generally in pairs, or three or

four together. It is seldom met with in open plains, but it is an inhabitant of the bush, and will lie tolerably close, starting up with a frantic rush when suddenly disturbed. A fine buck will weigh about 90 lbs. The male is dark-brown, ornamented with snow-white stripes, six or seven of which descend from the back upon either flank and the hind-quarters; a few white marks are upon the shoulders, and white spots upon the thighs; a long white line from the shoulder extends in a continuation below the transverse marks upon the flanks, and terminates near the junction of the hind leg. This resembles a white trace, hence the name "harnessed antelope."

There are many varieties of small antelopes which are hardly worth enumeration. These are scattered throughout an immense area north of the equator, and are never to be found in the same locality. The oryx (*leucoryx*) or the *leptoceros* of Heuglin is known by the Arabs as the bagger el wahash (cow of the wilderness). This fine antelope is confined to certain districts in the Taka country, also in Kordofan, but I have never met with it. The late Professor Heuglin was a pains-taking naturalist, whom I had the pleasure of knowing when staying in Khartoum, and we compared notes of all the animals with which we were mutually acquainted. He arranged the following list, which embraces all that I know practically, and many others which I have not seen.

ANTILOPE GAZELLA.

1. G. Dorcas.
2. G. Arabica.
3. G. Lœvipes.
4. G. Dama.
5. G. Sœmmeringii.
6. G. Leptoceros.

CALOTRAGUS.

7. C. Montanus.
8. C. Saltatrix.

NANOTRAGUS.

9. N. Hemprichianus.

CEPHALOLOPHUS.

10. C. Madaqua.
11. 12. Two unknown species in While Nile, called by the Dinkas "Amok."

REDUNCA.

13. R. Eleotragus.
14. R. Behor.
15. R. Kull (new species).
16. R. Leucotis.
17. R. Uruil (new species).
18. R. Lechée.
19. R. Megaceros (Black Antelope).
20. R. Defassa.
21. R. Ellipsiprymna.

HIPPOTRAGUS.

22. H. Niger.
23. H. Bakerii (new species).
24. H. Beisa.
25. H. Ensicornis.
26. H. Addax.

TAUROTRAGUS.

27. T. Orcas.
28. T. Gigas (new species).

TRAGELAPHUS.

29. Tr. Strepsiceros.
30. Tr. Sylvaticus.
31. Tr. Dekula.

BUBALIS.

32. B. Mauritanica.
33. B. Caama.
34. B. Senegalensis.
35. B. Tiang (new species).
36. B. Tiang-riel (new species).

It will be observed that the gnu (*Catoblepas gnu*) of South Africa is not found north of the equator.

All these interesting varieties of the species antelope exhibit peculiar characteristics; some partake the appearance and action of the goat, others of the buffalo: there is an affinity to the horse in the hippotragus, and to the Bos in the eland (*Boselaphus oreas*). To the traveller, the

antelope is invaluable, as it provides flesh more or less palatable for his party, at the same time that the skins of all varieties are useful, and can be readily tanned by the omnipresent mimosa bark, and the pods of the soont (*Acacia Arabica*). The fawns of antelopes must be destroyed in great numbers by the numerous carnivora, as they are completely helpless; they are also the prey of pythons, which seldom attack large animals, but subsist upon the calves, as their bones are easily crushed in the coils, and prepared for swallowing.

Some species will defend their young; among these the tétel (*A. bubalis*) is remarkable. I once witnessed a striking example, where the entire herd came to the rescue of a calf. I was shooting with only one attendant, a native named Shooli, who was a most trustworthy man and a devoted follower. This man was an experienced hunter and a first-rate tracker. The country was covered with high grass, that was not sufficiently dry to burn thoroughly, but in some places the natives had ignited it, and cleared small patches, in which the young grass had quickly sprouted to the height of several inches. These open places were an attraction to the game, which was otherwise invisible in the vast mass of tall vegetation.

We were prowling cautiously through the country, keeping watchful eyes upon our surroundings, when, upon passing a clump of trees, we observed a fine bull tétel standing sentry upon an ant-hill about 400 yards distant.

There was no doubt that a herd was somewhere in his neighbourhood, therefore we waited behind some trees, and watched the attitude of the sentry.

Presently we espied a doe, which emerged from the high grass, and walked carefully but inquiringly across the small open space, and then stood in a fixed position. We now crept upon hands and knees through the rustling herbage, as quietly as possible, in the hope of getting within 150 yards of the sentry. I had marked a particular tree as the spot to be reached which would afford concealment, and at the same time be within killing distance.

It was trying work for the bare hands among the sharp stems of the coarse grass, but we reached our destination, and then cautiously rose, in expectation of seeing the sentry upon his elevated post. He was gone, together with the doe. We had been quite invisible, and the wind was in our favour; probably some bird, frightened at our advance, had flown hurriedly away, this would have been sufficient as a signal of hidden danger.

We now threw off disguise, and walked direct towards the raised spot upon which the watchful tétel had taken its stand. There was a pile of droppings, of all dates, which proved that this was its daily resting-place in the middle of the green patch, that was regularly visited by the herd. While I was examining the signs, I observed my companion Shooli searching diligently among the young herbage, and he assured me that a calf must

be concealed somewhere near, as the doe would not have appeared alone unless she had a young one lying hidden, which she had intended to suckle if undisturbed.

Presently I saw him standing with his spear raised, aiming at something upon the ground. Upon approaching him, he asked if he should throw his spear; but before I could reply, a calf that had been lying close, like a hare in form, sprang up and raced away at great speed. In an instant the spear flew from the upraised hand, and striking the calf, it passed just beneath the skin of the back without injuring the bone, and penetrated through to half its length, thus impaling the poor little animal transversely.

Even with such an impediment, the strong young calf managed to get along, until at length it was captured by the active native.

He now withdrew the spear and asked whether he should carry it alive to camp. At the same time the calf, wounded and terrified, screamed loudly; this noise appeared to give Shooli a sudden inspiration. Telling me to kneel down, he beat the calf with his open hand, which made it repeat its cry of distress. In a few moments we heard a rush among the high grass, and as the cries of the calf continued, I saw a number of horns and heads appearing above the yellow grass, as the herd, leaping as they galloped, endeavoured to see the cause of the disturbance.

In less time than it takes to describe the scene,

some ten or eleven of these large animals frantically rushed into the open and charged direct upon Shooli, who was kneeling with his arms around the calf. I fired right and left within 20 yards, knocking over the leader upon the spot, and turning the herd, another of which floundered upon its side after running a few yards. I reloaded quickly, and fired another shot as they disappeared, like fish in water, among the tall herbage from which they had made their gallant attempt to save the calf from danger. Shooli assured me that had he been alone, the herd would certainly have knocked him over, and have rescued the calf.

I imagine that the animals concluded that the young one was attacked by some wild animal, and they determined to rescue it by an attack in force, thus exhibiting their affinity to the buffalo. The bull that was stretched upon the ground by the first shot was probably the same that had stood sentry over the herd, but had retreated to the high grass upon our approach.

My attendant Shooli assured me that the natives frequently met with accidents from the horns of this variety (*A. bubalis*) when following up a wounded animal in high grass. Some days after this adventure I was out with the same man and another excellent fellow named Gimôro. We observed a fine bull tétel lying on the ground beneath a tree, only the head and neck being visible above the grass. Taking Shooli with me, I made a very successful stalk, and obtained a position behind an ant-hill within 60 or

70 yards of the game. At this short range I could make certain of the centre of the neck, without allowing the animal to rise for the shoulder shot. I fired, and the head disappeared. To my surprise, a herd of fifteen or twenty of the same animals dashed away from some high grass and bush about 120 yards distant, and I fired my remaining barrel at the most prominent, as they were disappearing in the dense yellow herbage.

The bull was lying dead; therefore, as nothing had fallen to my other bullet, we examined the tracks, and shortly discovered blood upon the grass, in such quantities that we considered the wounded animal could not have retreated to any great distance.

We accordingly followed quickly upon the well-marked traces, Gimôro leading, with his spear in readiness to strike. The grass was so dry that it rustled as we brushed through, and there would be no chance of our coming suddenly upon the tétel. Twice we heard it rush forward as we approached, and in each place it had evidently been bleeding as it stood. We now went forward with extreme caution, and after an advance of about 150 yards, Gimôro hurled his spear, but at the same instant the tétel charged straight into him, with the spear sticking in its flank. He sprang nimbly upon one side, and I shot the animal through the centre of the left shoulder as it turned after the man. It fell instantly to the shot. The natives thought this excellent fun, and laughed heartily at the conclusion, but they assured me that great care is necessary when,

without a rifle, a wounded bull tétel is followed into high grass, as it is difficult to kill upon the spot by throwing a spear.

This is the only occasion upon which I have ever seen the tétel charge, but I do not doubt my informants, as they were thoroughly reliable.

As a rule, I make a point of hamstringing every species of animal (except an elephant) immediately that it falls to the ground; it is then safe. A slight drawing cut with a good hunting-knife will sever the tendon at once. Mahometans are very particular in performing the Khallâhl before life is extinct. It is a difficult operation to cut the throat of a large beast armed with sharp horns, while it is struggling upon the ground, especially when the hide is thick and tough, as in the case of bull antelopes of the larger species. I once had a deplorable loss of one of the finest koodoos (*A. strepsiceros*) that I ever shot. This was lying upon the ground, shot a little too high, and as it struggled violently, my men, to one of whom I had given my hunting-knife, were afraid to seize it by the beautiful long horns. It was in vain that I endeavoured to hurry them, until losing patience, I laid my rifle on the ground, and was about to take the knife myself in spite of their religious prejudice, when the koodoo suddenly gained his feet and started off at full gallop into the thick bush, leaving my dilatory people stupefied and amazed at the disappearance of their beef. We never saw this animal again.

The koodoo generally affords pretty shooting,

as it is found in deep wooded ravines, which can be commanded by a rifle upon both sides, should the animal rush forward from the bottom. Such deep places are seldom more than 100 yards across, therefore one person upon the margin can always obtain a shot when the koodoo is disturbed by throwing stones into the bottom of the hollow. In this case the rifle should be 100 yards ahead of the men who throw the stones.

I have never seen any variety of antelope that was really fat. Although they are exceedingly muscular and fleshy, being thoroughly well rounded, and in good condition, the best that I have seen would hardly produce one pound of suet; that being around the kidneys. Many of these animals are infested by parasitical worms. The bubalis has a species of large maggot which is found in the high bony protuberance upon which the horns are fitted. Some of the gazelles have worms which bore through the flesh, and are only stopped by the skin, upon reaching which a local inflammation is set up, and blood-red circular spots are found beneath the surface. I have frequently seen gazelles that were perfectly unfit for food, and nevertheless they appeared to be in good condition until flayed. When divested of the skin, they were in a deplorable state, the inner surface of the hide being covered with rings of blood, the results of the worm's puncture in its passage through the flesh.

There is a peculiar charm in the antelope tribe,

owing to their great variety and their gamey character, and I look back to many years passed in the African wilderness, where the associations connected with the wild animals of the country were far more agreeable than my experience of the human inhabitants.

CHAPTER XXII

THE DEER (*CERVIDÆ*)

THE deer has always been the game *par excellence* of the hunter. There is no animal more generally distributed throughout the world, therefore it has been, and still remains, the general attraction, as it is usually within reach of the hunter in all wild countries where it is not specially preserved. There is no animal which exhibits the necessity of preservation by game-laws more forcibly than the deer. In Scotland, where preservation has afforded a sanctuary by the strict observance of a close-time, we see an immense increase of numbers, although the conditions of the Highlands have entirely changed since the destruction of forests, which originally gave shelter to the red-deer. In mediæval times the shelter of vast areas of woods exerted a corresponding influence in the development of the animals. Shrubs, grasses, and various plants throve within the woods; these afforded nourishment to the animals during winter. At the same time, they were protected from the driving winds

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by their dense retreat, instead of being exposed, as they now are, to the fury of every winter's gale. The effect of misery has been seen in the deterioration of the animal. The deer exhibits in its horns the ratio of its vigour. If the animal has been well nurtured, and protected from its birth, never unduly exposed to privations, but sheltered and well fed through every season, it will develop antlers superior in length and solidity, and it will increase in weight. The red-deer of Scotland cannot be compared, either in size or antlers, with those of Central Europe, which exist in large forests, and live a life of undisturbed seclusion. Those which have been starved by exposure to cold and winter famine have naturally fallen off and deteriorated in size. A hart of twelve years old in our Scottish Highlands will hardly average 15 stone when grallocked, although some of those which have had the advantage of woods will exceed 18 and even 20 stone. The same species of deer in Hungary and Transylvania will average 20 stone, and will produce antlers of great length and weight, with from fourteen to twenty points, against the Scotch stag's ten or twelve. Nothing can more forcibly prove the necessity of shelter and good food. Many persons imagine that a wild animal can live upon anything, and will thrive where a domestic animal would starve. To a certain extent this is true, but, on the other hand, the creature will either improve or deteriorate,

according to the quality of its pasturage and its protection from the severity of climate. Nothing can improve by suffering; all pain and privation must have an adverse effect upon animals or human beings; therefore the destruction of forests in the Highlands of Scotland has not only deprived the deer of shelter, but has destroyed the plants upon which they depended for their winter's food. Foreigners are struck by the absurdity of the misnomer "a deer-forest" in Scotland, upon hills that are completely devoid of trees.

It is much to be regretted that the red-deer of Great Britain are no longer the grand animals which they continue to be in other parts of Europe. The trophy of a fine head is the reward for a painstaking stalk and a successful shot; but there are no heads in Scotland that are worthy of the name, as specimens of the antlers of red-deer.

As I have already remarked, the development of every animal will depend upon the favourable conditions of localities; as the red-deer has deteriorated in Scotland, it may have improved in other countries. I regard the wapiti of America as the red-deer upon a gigantic scale. If a wapiti stag were placed in a line with a fine German, and a Scotch red-deer, there would be an immense difference in size, but they would look like the same animal in gradations; there would be about the same

relative difference between the wapiti and the German stags as between the latter and those of Scotland.

Many years ago, through the kindness of the late Duke of Athole, I had an intimate experience of the Athole forest, which at that time was much overstocked with deer. The consequence was that they lacked size, and it was rare to kill a hart in condition, above 15 stone; 16 was considered much above the average, and very few of that weight were killed during the season. The horns were small in due proportion. The deer were so numerous in those days that the ground was foul from their great numbers, and I have seen upwards of a thousand together in one drive upon the hillside above Glen Tilt. At one time Her Majesty and the late Prince Consort were staying at Blair Castle, and the wind being favourable, several thousand deer were driven successfully to the desired spot, upon the hill-face opposite Ben-y-Gloe. Such an assemblage of wild animals could not have been seen in any other part of Scotland, but during winter the food for so vast a number was insufficient, and the deer upon that forest have dwindled through overstocking.

At Dunrobin, much farther north, the deer are larger, especially those which occupy the woods at the foot of the hills. Twenty years ago, when, a guest of his Grace the Duke of Sutherland, enjoying some deer-stalking upon the hills, I was

struck with the superiority in the size of the deer compared with those of Blair; this was due to smaller numbers, better food, and shelter of large woods, to which they could retire during winter: 17 and 18 stone were not extraordinary weights for stags of ten or twelve years old.

It is a curious fact that the rutting season commences with the hard frosts of October, after which the deer are out of season. With other animals this sexual excitement is the result of warm weather, or early spring, when birds and creatures of all kinds, released from the icy fetters of the winter, commence their loves in the warm hopes of approaching summer.

When October arrives, the stags begin to bellow, the hair of the neck grows coarse and long; they fight with great fury to obtain the mastery of the hinds, until the master stag, having gained the ascendency through frequent combats, associates with the females, and becomes a ragged-looking object, far different from the grand appearance which marked him as the lordly hart at the first commencement of his amours.

It is generally believed that all deer shed their antlers annually, but this is not the case. Both the red and the fallow deer shed their horns in spring. The huge wapiti of America does the same, but the sambur of India is supposed to change its horns only once in three years. There is no regular season, either in India or

Ceylon, but the same species may be killed throughout the year with the horns in different degrees of development.

In forest countries the stags are very careful in their movements during the early stages of their antlers. When these first sprout, they somewhat resemble the thick stalk of rhubarb, as they push boldly from the root with a round, blunt termination, covered with a glistening cuticle. These growing horns are very sensitive, and the stag has a strong objection to pushing its way through tangled thickets. I have known localities among the lofty mountains in Ceylon, beneath bare precipices of rocks, where plateaux at lower levels were free from jungle, in which we were sure to find a stag with horns in velvet; these secluded spots, which produced good pasturage, were at the same time open, and afforded space to move, without danger to the growing horns.

There are few things more curious than the growth of a deer's horns. We have already seen that those of antelopes resemble the horns of oxen, goats, and sheep: these are sheaths fitting upon an inside core of bone, which is a projection of the skull, and never can be shed. The horns of deer commence their growth when the male is two years old, in a single spike about 6 inches long. This is perfectly hard and solid, but, like all mature horns, it falls off in spring, leaving the peculiar porous base ready for the

growth of a larger pair. If the animal is healthy, and the conditions of the locality favourable, each annual shedding is succeeded by an increased size. The base or foundation grows broader and more solid every year, and the spike horn forms a tine. As age increases, the horns become antlers, as the tines not only enlarge, but extend in number, until the animal reaches the prime of its existence; this would be when about twelve years old. At that age the red-deer of Scotland might have ten or twelve points, sometimes fourteen, when the stag becomes "imperial," the points sprouting from a thickened portion of the horn, which forms a cup. Every pointed projection, however small, is termed a "point"; thus a stag of twelve will frequently possess only ten good tines, and a couple of projections of 2 inches in length will make it twelve.

The growth of antlers is extremely rapid. The young horns commence in the beginning of May, and they are sufficiently hard beneath the downy skin to commence to peel in the first week of August. While growing they are nourished by small blood-vessels, and, as by degrees they become developed, the points denote the maturity of the formation. When these become acute, the bone is thoroughly set and the cleansing process is commenced. The small veins dry up, and become obtuse; the downy skin, which is known by the name of

"velvet," also becomes dry and leathery. As the blood-vessels contract and wither, an itching is set up; this encourages the animal to rub its antlers against some tolerably yielding surface, that will by degrees detach the irritating cause. The deer generally seeks a sapling of about an inch in diameter for its first rubbing post, as the horns are still delicate. In a few days, having destroyed several of these yielding stems, it ventures upon a tougher material, until at length it has no choice, and boldly rubs the last adhering strings of velvet from its horns against the rough bark of some old birch, or any tree that will assist to cleanse its antlers from the irritating substance.

When the large horns of sambur or wapiti are growing, they make an excellent dish; first scalded to divest them of the down, and then gently stewed with a good sauce and a few vegetables.

If a deer is badly hurt during the growth of antlers, there will generally be some deformity in the shape of one, or perhaps both. Any accident to the horns while young in velvet has a direct effect upon the antlers, and will set up a local inflammation, which interferes with the ripening of the horn. I have seen a stag which had two peculiarly curved tines of great length; these had interfered with its progress through the woods (in America), and had evidently caught among the branches like a grapnel.

Although the horns were perfectly hard when I shot the animal, the ends of these tines were bloody, and instead of sharp terminations, they were round and thick, showing that a chronic inflammation had prevented the horns from hardening, and had kept the blood-vessels in continued action.

As the stag becomes old, and its powers are on the wane, the annual horns become shorter and thinner, the rough exterior loses its knobby appearance and becomes smooth, the tines are short and fewer in number, and the antlers, which in former years were the signs of vigour, exhibit in their reduced appearance an evidence of decay. Should a stag be castrated, the horns cease their growth.

The female carries about eight months, and has only one calf. None of the females of the genus Cervus have horns except the reindeer; but I have had no personal experience of the latter species.

It is to be deeply regretted that the red-deer no longer exist in the New Forest in Hampshire, the Forest of Dean in Gloucestershire, and other places, where in 1838 they were sufficiently numerous. I remember them when they were strictly preserved by the Crown, and the heads of those in the Forest of Dean were very superior to any that exist in Scotland. I am surprised that such persons who are the fortunate proprietors of deer-forests do not import fine

specimens of German deer to cross with those of our own country. Any visitors to Vienna must be struck by the magnificence of the antlers borne by the stags in the Prada, on the outskirts of the city; in our own country there is nothing that will compare with them.

The hunting of deer, like all other sports, must depend upon the condition and customs of the localities. There can be little doubt that "hunting" is far superior, as a sport, to shooting. But hunting must depend upon the country. You can shoot anywhere, but to enjoy hunting, the country must be open, and the ground passable for horses. The only portion of Great Britain where the wild red-deer is still hunted in the old-fashioned manner with horses and hounds, is upon Exmoor; there the deer remains as it always has been; and may it long continue, as a relic of the olden times, is the wish of every person who takes an interest in the chase.

During a long experience I have seen deer both hunted and shot, in different ways, and the proof of the superiority of this animal, as the perfection of sport, is the fact that it affords intense excitement in every form and condition of the pursuit.

There are so many varieties, that a volume might be devoted to the deer alone, instead of mingling it together with wild beasts and their ways. Every kind of deer possesses distinct habits and peculiarities; it is therefore im-

possible to describe their "ways" generally, but to be correct, every species requires a separate description. The red-deer (*Cervus elaphus*) is the same throughout Europe, Asia, and America, differing only in size and denomination. It is hunted in various ways.

Anderson described a hunt in Siberia with a large species of eagle, which actually killed the deer before those who were mounted on horseback could reach the spot. He was himself present, and his explanation of the incident was clear and graphic: the eagle tore out the liver, after having coursed and struck the stag upon the open plain.

In Scotland it would destroy sport if the red-deer were hunted with hounds, as they would be driven *en masse* beyond the limits of the forest. If deer are in herds, they should never be hunted. A solitary stag that has harboured in some particular spot, and has been carefully marked down, might be turned out and coursed with deerhounds, but even then the forest might be disturbed if the course were long. There can be no doubt that a deer-forest should be kept as quiet as the grave.

There are agitators in England who disturb the minds of unthinking men, almost as much as yelping curs would scare the deer in a well-secluded sanctuary. It is the prevalent fashion, among these egotistical people, to describe to an ignorant

audience what they consider to be the birthright of mankind. This birthright takes the attractive form of appropriation. A man, no matter who, is supposed to be born with a birthright that will enable him to wander (trespass) at will over the grounds of another private individual, who has either inherited his land, or become a proprietor by purchase. The rights of game are questioned, and condemned, as "wild creatures are God's gifts to mankind, and are sent for the benefit of all."

These gentlemen forget that the important element of "water" may be claimed as a gift of nature for mankind, but that private wells cannot be invaded by the public, neither can springs upon private property be interfered with. They also wander from historical fact when advancing the theory of a natural right to land, or a right to game. If these agitators, who know nothing of primeval rights of man, were to examine the actual conditions of primeval society as represented by the vast numbers of tribes in Central Africa, they would discover the utter fallacy of their arguments. I extract, from what I wrote upon this subject when in Africa, a few observations that may be worthy of their attention, showing that the earliest rights (*private* rights) of man consisted in the possession of land and *hunting-grounds*:—

"Although the wilderness between Unyoro and Fatiko is uninhabited (about 80 miles), in like manner with extensive tracts between Fabbo and Fatiko, every portion of that apparently abandoned

country is nominally possessed by individual proprietors, who claim a right of game by inheritance.

"This strictly conservative principle has existed from time immemorial, and may perhaps suggest to those ultra-radicals who would introduce communistic principles into England, that the supposed original equality of human beings is a false datum for their problem. There is no such thing as equality among human beings in their primitive state, any more than there is equality among the waves of the sea, although they may start from the same level of the calm. . . . In tribes where government is weak, there may be a difficulty in enforcing laws, as the penalty exacted may be resisted; but even amidst these wild tribes there is a force that exerts a certain moral influence among the savages, as among the civilised: that force is public opinion.

"Thus, a breach of the game-laws would be regarded by the public as a disgrace to the guilty individual, precisely as an act of poaching would damage the character of a civilised person.

"The rights of game are among the first rudiments of property. Man in his primitive state is a hunter, depending for his clothing upon the skins of wild animals, and upon their flesh for his subsistence; therefore the beast that he kills upon the desert must be his property; and in a public hunt, should he be the first to wound an animal, he will have gained an increased interest or share in the flesh, by having reduced the chance of its escape. Thus

public opinion, which we must regard as the foundation of *equity*, rewards him with a distinct and special right, which becomes *law*.

"It is impossible to trace the origin of game-laws in Central Africa, but it is nevertheless interesting to find that such rights are generally acknowledged, and that large tracts of uninhabited country are possessed by individuals, which are simply manorial. These rights are inherited, descending from father to the eldest son.

"When the grass is sufficiently dry to burn, the whole thoughts of the community are centred on sport; but should a person set fire to the grass belonging to another proprietor, he would be at once condemned by public opinion, and he would (if such establishments existed) be certainly expelled from his club."

It is not my intention to enter upon a treatise concerning game-laws, but there is a fact that is beyond contradiction — the existence of game depends upon preservation. If the game-laws were abolished, and all protection withdrawn, reducing the position of game to that of vermin, the question would resolve itself without further argument, as there would, within a very few years, be no existing subject of dispute. The game would entirely disappear, as it has done in most parts of France.

The destruction of red-deer has already been complete in England, excepting the small number still remaining at Exmoor; and those of Scotland

would quickly share their fate should the existing laws be abolished.

The character of the nation would be severely affected should the game of the country disappear. No pursuit can be more conducive to a development of manly instincts than that of either shooting or hunting. It teaches a man to be quick, and ready for any opportunity or emergency; he must have a correct eye for country, and considerable decision of character. He must be a good rider, and must excel both with the rifle and the smooth-bore; he must be hardy in constitution, and sound in wind and limb, if he is to enjoy the exercise which must accompany all field sports, whether on horseback or on foot.

At the present day England takes the lead in the manufacture of first-class fire-arms. The reason may be accepted, that those who enjoy the sports of the field can afford to pay for the best quality. This is an important industry that would be almost effaced should the game of the country disappear. In the vast Empire of India, where extensive tracts of dense jungle were considered sufficient to ensure the security of wild animals, it has been found necessary within the last twelve months to introduce special laws for the preservation of the game, which was fast disappearing before the unremitting attacks of man.

In Ceylon there have been stringent game-laws for many years, but in spite of this undeniable necessity, there are persons who madly clamour

against the protection of game in England. The value of a deer-forest in Scotland is many times superior to the annual rental for sheep pasturage. It is absurd to complain that the poor have not the same privilege as the rich; nobody, unless a professional agitator, envies the rich man his harmless enjoyments, and the fact of wealth being introduced into the wild Highlands brings comfort and employment to many who would otherwise seek their livelihood on foreign shores.

Nothing can be more enjoyable than deer-stalking in the Highlands. In olden times, when people shot with muzzle-loading rifles and small charges of powder, the shooting was more difficult than in the present day, as the trajectory of the bullet being high, it was necessary to judge the distance accurately, to adjust the back-sights of the rifle. The improvements within the last twenty years have produced the perfection of weapons for deer-stalking in Scotland, as the trajectory of the modern Express is so low that no elevation is required for 150 yards. Practically no other sight is required beyond that of point-blank.

I mentioned in the commencement of this work, the name of Purdey as the first inventor of the muzzle-loading Express. This was then called No. 70, as that number of spherical bullets weighed 1 lb. In those days there were no decimals of the inch to designate the size of a bore, but the relative proportion to the pound was always understood by the number of the calibre.

A dear friend, the late Sir Edward Kerrison, presented me with a very beautiful Purdey rifle of this calibre, the first Express, which burnt 4 drams of powder, and carried a conical solid two-grooved bullet weighing 200 grains. I considered that rifle perfection for deer-stalking in the Highlands, as it was point-blank for 150 yards—merely permitting the natural intelligence of the shooter to take the sight either coarse or fine, according to his estimation of the distance. During the season of 1868 I was enjoying the hills and hospitality of his Grace the Duke of Sutherland, and afterwards of the late Lord Middleton at Applecross; I fired at fourteen stags with this Express solid bullet of Purdey's. The rifle bagged thirteen out of fourteen; and I felt ashamed of myself that the only escape was the first shot fired, at Dunrobin, when, never having previously fired the rifle, the extremely light pull of the trigger deceived me, and it went off by accident, breaking the fore leg of a hart just below the shoulder, to my disgust and disgrace.

That little bullet was about the diameter of the modern ·400, but, as its small weight denotes, it was exceedingly short. It may be readily imagined that the extreme velocity doubled up the soft lead upon impact with the tough muscles and bones of a red-deer, so that the bullet never passed through, but remained within the body, or generally beneath the skin on the side opposite to that of entrance. Although I have always regarded that weapon as perfection for deer-shooting, there was a difficulty

in loading. The first movement was to pour into the extremely small bore 4 drams of powder, without spilling it; the second was to press down a thin wad, with a thick greased felt-wad on the top of it; the third was to wrap the bullet in a greased linen patch, and ram this gently upon the greased wad. As the winged bullet was mechanically fitted, and highly greased in its linen patch, it was thoroughly air-tight, therefore the force necessary in loading compressed the air between the descending bullet and the wad upon the powder. The bullet formed a piston, and when the weight of the loading-rod was removed, the elasticity of the compressed air forced the bullet upwards, and left a dangerous vacuum between it and the powder about 8 inches distant. This was a source of danger, and although the barrel was of sufficient strength to resist the strain, by not absolutely bursting, many barrels bulged, my own included. Nevertheless the move had been made by Mr. Purdey in the right direction. I used this rifle in Scotland and in Africa, and I never made better practice.

Deer-stalking in the Highlands, although most enjoyable, is a selfish sport. If a house is full of guests, it is almost impossible to afford "stalking" for any number, it is therefore necessary to drive, as by this means all can share in the day's sport without prejudice. At the same time, there is a great gulf between stalking and driving. In the latter process much knowledge is necessary, and great patience on the part of the keepers or gillies,

but there is nothing for the shooters but to lie hidden in the positions allotted to them, and to shoot well when the opportunity offers. On the other hand, stalking requires a profound knowledge of the habits of red-deer, and thorough experience in the geography of the locality, together with patience, coolness, and bodily activity. We will assume that the weather is not bad, and that we start for a day upon the hills. The dress will be arranged for easy walking, and for concealment from view. I object to the kilt strongly, as it swings, and any object in movement is liable to attract attention. Bare knees are not adapted for crawling along the spiky stumps of burnt heather. There is nothing better than heather-mixture of strong tweed trousers, and a Norfolk shirt; certainly no white collar.

The attendants are very few. A gillie, a mile in the rear with his pony and deer-saddle to bring home the dead. Another gillie, who leads a brace of deer-hounds in the slips, about 200 yards behind you. The keeper who accompanies you, and who will severely test your patience unless you make him thoroughly understand, before you start, that he is to keep quiet, and in no way whisper, tug you by the sleeve, or offer advice at a critical moment; but that he is to remain a dumb companion. This is all that you require.

Stalking is tolerably hard work upon some deer-forests, although easy walking upon others. We will say that the month is September, at which time

the horns are certain to be clean. No sheep have been permitted upon the forest, therefore the only enemy is the grouse or the blue-hare. Nothing is more perplexing than the whirr of a disturbed grouse, whose sudden flight is certain to awaken the attention of the deer, when otherwise your position would be well concealed. Attended by an experienced gillie, you may have ascended a steep mountain side, commanding an extensive view of deep corries, precipitous slopes, barren rocks that have fallen in chaotic confusion from bare cliffs, and have nearly choked the burn which threads its silvery way beneath. Your guide halts suddenly, and seats himself upon a convenient rock or tump of heather. "We'll just tak' a bit o' a spy," exclaims your attendant, who can always halt and rest, when he feels blown, by such a plausible excuse. The field-glass is at once brought to bear upon the rusty surface of the heathery scene. Every hill-face is scanned; the sky-line of each mountain; the dark depths of inhospitable corries,—nothing is in view.

"Weel, I never saw the like o't; it's just bad luck that we met that d—d auld witch when we first started," exclaimed Sandy. "I never kent the day for guid sport if auld Bell cam' across the path;"[1] and he spat upon the ground. "She's just

[1] According to Highland superstition, it is bad luck if the first person met when starting should be an old woman. Old Bell was considered to be more than usually uncanny. The generally accepted antidote to the spell is to spit upon the ground.

an uncanny body that brings nae guid, and my eyes are just that dull I canna see through my gless; but I dinna remember thae stanes by the bit saft green moss near the tap o' that dark corrie yonder." A steady look with my own glass determined that the stones were hinds, lying down in the deep heather, near a spring in the mountain side. The question remained: "Was there any hart in the neighbourhood?" None could be seen; the hinds were about three-quarters of a mile distant in a straight line, but double that distance by actual approach. It would never do to disturb them, as their retreat would alarm any stag that might be lying within view. The only plan was to back out of sight, to take the wind, and to make a circuit round the hill, in order to come down from above them. In stalking a deer, you should always endeavour to approach from above. The deer seldom looks towards a height, but when standing upon an eminence, it looks downward upon the great extent, which from its elevated position is exposed to view. When you find it impossible to advance direct, and it becomes necessary to make a long detour, the work begins, and you appreciate the advantage of a thorough knowledge of the country. We were soon out of sight, and crossing a lower shoulder of the hill we had ascended, we hurried along the opposite side under cover of the ridge for at least a mile and a half, and then descending into a rocky torrent-bed, we commenced a careful ascent towards the summit. This was a

gap which formed the watershed, and the source of the burn that we had adopted for our route. We were now above the deer, and instead of being in our front, they were upon our left. They were still lying down, and nothing more was visible. Under these circumstances it was necessary to cross the ridge and see what might be in view upon the other side of the hill. We accordingly drew back, and then followed the horse-shoe shape of the ridge, until we arrived upon the same slope on which the deer were lying. We arrived at a broken portion of the ridge, where large rocks were scattered over the surface; ascending to the sky-line, we had a clear view of the other side, as we were now just above the hinds, which were not in sight, but about 300 yards upon our left.

Almost at the same moment, Sandy and myself, without uttering a word, knelt slowly down. There was a pair of antlers and a portion of a head about 200 yards below us on our right. The stag was lying down in very deep heather.

The wind was wrong; but as we were high above him, we remained unobserved. There were no means of stalking that stag, as there was absolutely nothing except the heather to cover us. I whispered to Sandy to remain where he was, while I would endeavour to crawl cautiously through the heather. The face of the hill was so steep that crawling head-foremost was impossible, and I was obliged to wriggle upon my side and back, feet-foremost. By degrees I made progress, and I

flattered myself that I should get within 100 yards, when suddenly a hind and fawn which had been concealed in the deep heather sprang to their feet about 150 yards upon my right. I sank below the heather, and was out of sight, but I felt that the stag was on his legs. Gradually and cautiously raising my head, I saw the stag standing about 120 yards from me; the hind and fawn, upon the right, were looking out across the line of our positions. They evidently had my wind. If they had commenced to run, the stag would have followed in an instant. He was looking downwards upon the glen below, but he was standing almost broadside towards me. I was lying on my back, therefore slowly and carefully I sat up, my head was just above the heather as I raised the rifle. Almost at the same moment the hind and fawn started off; the stag was in the act of moving when I fired. He fell to the shot, disappearing in the heather, and now and then exposing his antlers as he struggled on the ground. I began to step the number of paces to measure the distance, which is my usual custom. I had arrived about half-way, when the stag suddenly jumped up, and without a moment's hesitation started at full speed down the steep mountain side, as though he never had been touched.

"Slip the dog," I shouted at the top of my voice, but the knowing gillie had already done it. He had closed up with the keeper, whom I had left behind when the stalk commenced, and he had been

watching the progress of the stalk with intense excitement. He saw the deer fall, and was running towards me when the stag regained his feet; at the same moment he loosed the dog, and Oscar, who was a first-rate hound, came bounding past me with the game full in view.

Whatever superiority Oscar might have possessed upon level ground, was entirely lost through the rough nature of the country. The stag completely distanced him in the race down hill; one hope remained, that upon reaching the peat moss in the bottom, the heavy soil would be against the deer, and the hound might recover some advantage.

Hurrying at the best pace possible down the the steep incline, through the deep heather, occasionally slipping backwards over the clattering stones, we ran down the hill, which in ordinary moments would have required careful walking. Now, the stag was going across the deep peat moss, and the snow-white Oscar was a bright speck upon the brown surface, gaining decidedly in the race of life and death. Had the deer been stationary, it would have been difficult to have distinguished it upon the peat moss, which matched exactly with its colour; but as it sped before the dog, and became smaller as they both increased their distance, we could just determine that the stag would disappear from view before we should be able to reach the lower ground.

This proved to be the case, and from the

direction taken by the stag, I much feared that it would escape should the hound lose sight of it among the numerous torrent-beds between us and the river Bruar. I knew Oscar to be thoroughly good, but although a fleet and powerful hound, he had been trained, like all others, to bring a wounded deer to bay, but not to seize. This always appeared an absurdity to me, but it was a rule of the forest (Blair-Athole). If the deer were determined to make for a certain point, there was nothing to stop it; the only chance lay in its being pressed so closely by the hound that it would turn to bay in some favourable locality.

I could run like a dog in those days, and the hardy gillie and myself hurried across the heavy ground for about a mile, making for the direction where the stag and Oscar had both disappeared. The level swamp drained into many burns; these had cut deep clefts in the slopes which inclined towards the lower country. We had lost all clue to the whereabouts of both stag and hound, and after running for nearly a mile beyond the swamp where we had last seen them, we halted to listen, in the hope of hearing the deep voice of Oscar with the stag at bay.

Suddenly, to our surprise and disgust, we observed a white object in the distance returning in our direction; this was Oscar, having lost his game.

Having had many years' experience, I felt certain that the stag had thrown the hound off by running

down a stream before the dog had come in view, and it would probably be standing in some deep place for concealment. We accordingly called the dog, who appeared to receive fresh courage from our presence. After a run of about half a mile, we arrived at a stream flowing along a deep gully, where the tracks of the deer were most distinct, the hoofs being widely spread, showing that it had been going at great speed. As the torrent rushed down some ugly places, I felt sure the deer would be in hiding somewhere not far distant; I therefore encouraged the dog by hallooing him on, and he presently dashed away to the left, as though he had obtained the scent. In another minute we heard a few loud barks, and we saw the stag going off down the hill about 200 yards distant, with Oscar close behind. With a good view halloo to cheer the dog, we followed at best speed. After a run of a quarter of a mile, we had a splendid view of the stag at full speed, and the dog upon its left flank; had Oscar been trained to seize, he should have immediately tackled his game by the throat or ear. Instead of this, he simply kept his position, and presently turned a somersault as the stag kicked him in the chest, and then gained 30 or 40 yards before the dog could recover from the fall. Again both deer and pursuer were lost to view, as they disappeared among steep descents and broken ground. We had run more than three miles from the spot where I had fired the shot, and I could now form a tolerably correct idea of the spot where

the stag would come to its final stand. The river Bruar lay before us about a mile distant, and, as we hurried forward, I caught sight of a white speck in the far distance. I felt sure this was Oscar, and the stag was still in front, although from its colour, matching with the brown heather, we could not distinguish any animal beyond the hound.

We were not long in reaching the steep banks of the Bruar, about a mile and a half above the falls. Nothing was in sight, but as we halted to listen, our hearts beat with delight at hearing the voice of Oscar, with the stag at bay somewhere beneath, in the dark hollow of a sudden bend. Hurrying towards the spot, the voice of the dog ceased; the stag had broken his bay, and instead of crossing the precipitous rocks, it turned back, and passed us at full speed within 40 yards, with the dog in chase behind it. A shot through the neck rolled it over, and for the first time Oscar seized it by the throat. I did not fire at the neck, as I had intended to hit the shoulder; but I had been running for four or five miles, and I was out of breath.

My first shot was too high. It was in good line just behind the shoulder, but it had passed through the animal exactly below the spine. The shock had knocked it over, but it had almost instantly recovered, and practically it was as fresh as though it had not received a bullet.

When aiming at an animal that is standing upon a steep incline below you, the greatest care

should be taken to shoot low, as near the brisket as possible, to attain the shoulder. I made a mistake when shooting quickly from an uncomfortable position, and did not make a sufficient allowance for the downhill shot.

Reminiscences of the Highlands would make a volume, and I cannot afford space for any lengthened descriptions of the red-deer of Scotland, which are well known to so many who have had, perhaps, greater experience than myself; but the great numbers of deer, and the facilities for acquiring a knowledge of their habits, offer a more than ordinary advantage, and yield information that would be difficult to obtain elsewhere.

Although I do not class deer-driving with the far nobler and more exciting sport of stalking, the driving is most instructive in affording a knowledge of the habits of the animal. The deer will always travel against the wind, which affords notice of an enemy.

Certain winds will be in favour of particular drives, and it would be absurd to attempt a drive unless the wind were favourable.

There was no forest where deer-driving was better organised than at Athole, in the last Duke's lifetime. Through his great kindness I had much practical experience for some years upon those well-remembered hills. If the wind was fair, the valley of Glen Tilt was the favourite position for the rifles. The so-called "boxes" were shallow pits built up with rocks and sods of turf to resemble natural

excrescences. These lined the left side of the road when ascending from Forest Lodge, the river Tilt rushing in a brawling stream upon the right.

The "boxes" were about 200 yards apart, and the hills rose more or less abruptly to the height of about 700 feet above the glen, exhibiting a clean sky-line, upon which in clear weather a dog might have been distinguished with the naked eye.

On the opposite face, to the river's left, were the lofty Grampian Hills, Ben-y-Gloe being the highest point.

The prettiest drive when the wind was favourable was that in face of Ben-y-Gloe. The keepers and gillies had stereotyped instructions that the deer were to be on the sky-line at 3 P.M.

To effect this, they would leave the Castle at about 4 A.M., and take a circuit embracing about 20 miles, from which they would converge towards the appointed spot above Glen Tilt. The driving of deer is a science; very few men are necessary, and they should be at intervals of a quarter of a mile apart. Eight men will accordingly cover a line of 2 miles. They would commence at a great distance by intervals of half a mile, or even more, gradually converging as they approached the terminus of the drive.

The various herds or "parcels" of deer, seeing the men extended in their rear, but not obtaining their scent, as the wind was in the front, would gently move forward in the required direction, if the drive were properly conducted. No noise of

any kind should be made, no wild gesticulations, but the men should march slowly but steadily forward, halting occasionally according to the movements of the deer.

I have frequently been with the keepers, with instructions to prevent the deer from breaking back. The greatest possible care is required to keep them straight, and to drive them forward without flurry or excitement. As herd after herd joins the general movement, as miles of heather have been traversed, the difficulty increases, as the deer become suspicious of danger, and evince a strong desire to charge back through the wide intervals between the advancing line.

When a herd turns round and faces the keepers, the simple action of exposing a white handkerchief, without waving it, is generally sufficient to stop the deer, and to prevent them from making a rush towards the rear. Should one lot of deer rush back and succeed in escaping from the drive, it is highly probable that every deer, even should there be a thousand, would follow suit, and a general stampede would produce a complete failure.

The hinds are always the leaders of a movement, and the harts, or stags, are dependent upon these wary females for advice.

When the drive is advancing, and perhaps five hundred deer may be moving slowly and hesitatingly forward, some clever old hind, a regular "old parliamentary hand," will turn round and confront the men at about 400 yards' distance. Several other

hinds will immediately imitate her example, until at length a large number of deer will have halted in a crowd. A keeper will immediately display a white handkerchief, and for the moment halt; every man along the line will do the same. The old hind will perhaps advance inquisitively forward, as though to examine the peculiar appearance of a white handkerchief. This is dangerous, and she must be stopped. A shrill whistle will at once turn her, and as she retreats, the handkerchief may be slowly waved, as the man advances.

In this manner, by degrees, with quiet and reflective management, the large mass of animals may be induced to move in the required direction. Should some determined hart or hind make a rush backwards in desperation, it must be stopped at all hazards by a shot, but the great secret of success is quietness.

In the meantime six guns are anxiously waiting in the same number of boxes at the foot of the hills, thus lining the valley of Glen Tilt. The order has been given that the deer are to be visible on the sky-line at 3 P.M. Every watch has been set to the same time, and the anxious watchers have been repeatedly conferring with their dials, and scanning the sky-line with their binoculars, as only five minutes remain of the time appointed.

The keepers in the rear of the advancing herds have also referred to their watches, and they take a pride in carrying out their instructions with the greatest punctuality.

Everything goes well, and those who are watching below suddenly observe a solitary head and antlers clearly defined upon the sharp outline of the hill-top. Then another, and another, until single deer are multiplied, and the crest of the hill is covered with a display of deer, stags and hinds confused together; other stags in company; and a few hinds some 50 yards or more in advance, to reconnoitre, before the main body will venture upon a general forward movement down the mountain side.

It is highly interesting to watch the caution of the hinds; how they regard the view before them, how they scrutinise the right and left, and leave nothing unobserved. Then perhaps the wary old hind herself advances alone, and trots along the face, regarded anxiously by every deer of the vast herd, all confident in her qualifications as a pilot.

By degrees she becomes satisfied, and she walks briskly down the hill, followed by about twenty other hinds; these form a kind of advance guard, followed by a number of stags, and a mixed lot of all kinds, as they feel that no danger exists in front.

In this way they descend the hill, and shortly afterwards the sky-line will be occupied by a line of sentries in the shape of keepers and gillies, who, having successfully driven the deer before them, now stand as though on parade upon the ridge, their duty having been well performed.

The work is not yet over. Great care is now required. The keepers must not descend too

hurriedly, but only remain standing, and show themselves to encourage the forward movement of the deer. They are now nearing the bottom, and in a few minutes will be splashing through the shallow waters of the Tilt. A few fine harts are following a parcel of cunning hinds, which have halted a dozen times before they reached the bottom. These are already belly-deep in the water, wading across the river; the harts are following, and are near the stream. Suddenly a puff of smoke, then another, from a raised portion of the heather! A stag falls, and the astonished herd rush frantically to the right; another puff of smoke from a hidden box rolls over another stag.

A rush takes place in all directions: some force a passage across the river, several falling to successful shots as the fire is opened from every box that is available; some deer break back, and reascend the hill. Now the active rifles which have advanced in line with the keepers throughout the drive run nimbly forward, and endeavour to intercept those animals which are determined to break through the converging line of drivers.

At length the drive is over. The main body of the deer have crossed the river, and can be seen in scattered groups ascending the steep sides of Ben-y-Gloe. A few have succeeded in breaking back, some eight or ten are killed, and two or three are wounded, and may be seen standing alone about half a mile distant, mid-way up the hill.

There is a gillie well above one of these stags

hurrying forward with a deer-hound in the slips. When the dog sees the deer, and strains upon his collar, he is loosed, and away he goes straight for the stag, who is looking after the departed herd, and has not observed the approaching hound. Suddenly it perceives the danger; as though unhurt, the stag flies down the hill-side, running obliquely to avoid the steep descent, and the dog is shortly at its heels. Both disappear among the bushes of a small copse of birch; a few minutes later, everybody is running towards the bay, as the deep voice of the hound proclaims that the stag is in the river, standing before the dog in bold defiance.

There is hardly a more sporting sight than a stag at bay; but as the dogs are trained simply to follow a wounded deer until it stands, when the baying of the hound will attract the attention of the far-distant men, the termination of the hunt is a tame affair, as the deer is shot directly that the rifle arrives upon the scene. . . . About thirty-two years have passed away since we discussed the question whether the deer-hounds at Blair would seize a stag, if it were considered necessary. Most persons who knew the training of the dogs thought not. The Duke of Athole inclined to that opinion. On the other side I thought they would, provided that no rifles were taken out, and the dogs should see that the stag was to be tackled at close quarters with the knife.

There never was a keener sportsman than his

Grace the late Duke of Athole, and he was good enough to consent to a trial. The arguments had interested the ladies of the party, and it was arranged that I might select any two of the deer-hounds, and hunt down a fresh stag, run it to bay, and kill it with a knife. To myself the affair appeared exceedingly simple, as I had been accustomed to this kind of hunting for many years on the mountains of Ceylon, but others disbelieved that the two hounds would bring a fresh deer to bay, as they had always been accustomed to follow animals that were wounded.

By the advice of the head forester, Sandy Macarra (MacCarra), I chose my old friend Oscar, and another hound, whose name I have forgotten.

We were a large party, and we met at Forest Lodge, about 10 miles from the Castle, in the middle of Glen Tilt. There are few glens in the Highlands more picturesque. The road from Blair Castle passes through lovely woods bordering the impetuous stream; this rushes wildly through contracted passes, hemmed in by opposing rocks; sometimes it is girt by stony cliffs half concealed by lichens; other portions of the face combine every shade of colouring in vivid tints. The mountain ash, with clusters of scarlet berries, overhangs the rocks in rich profusion of both fruit and foliage, until at length the open glen is reached, beyond the limit of the woods.

This is a well-known resort of tourists, and nothing can exceed the wild beauty of the scene,

when about the middle of September the autumnal tints have ornamented every leaf with peculiar brightness. Although we have emerged from the main woods, there are clumps of weeping birch with its silver bark, and golden leaves; and rowan thickets bending over the rapid river, now and then reflected in the calm surface of a deep pool, where the salmon are lying waiting for a flood. This kind of rough scenery continues throughout the glen, the narrow bottom occupied by the river, bordered by a good road, while the mountains rise upon either side, and form the Grampian Hills.

The afternoon was perfect; all that was required was game.

Certainly the presence of many ladies brought us luck; for, after scanning in vain a long expanse of country, we were suddenly delighted by the almost magical appearance of a stag; he had been lying down behind a large rock a little more than half-way up the hill-face. He now stood regarding the carriages, and our large party, which included the keepers, and the two hounds from Forest Lodge. The stag was about 1000 yards distant. I was only afraid that he would commence a trot up the hill, and disappear above the sky-line; but fortunately we were upon the main road, upon which the deer were accustomed to regard passengers (although few), who did not interfere in any manner with their domain. It was therefore decided that the party should turn back, and drive for about a mile on the Castle side of Forest

Lodge, while I should walk on until I should be out of the deer's sight; I could then discover a favourable position for ascending the hill, and coming down from above upon the stag. This was an excellent arrangement. The party turned back, while I continued on my way, accompanied by two of the hill-men and the dogs.

It did not take us very long to climb the hill, and we found ourselves upon the well-known desolate extent of heather, sloping always upwards, although we had reached what from below appeared to be the summit. There were a few hinds within view, and some young harts, but they were not in a position to disturb the stag, who was far away out of sight, being on our left, well below, upon the hill-face.

There was neither caution nor science required, therefore we made a quick advance, marching parallel with the glen, about a quarter of a mile on the right of the incline above the Tilt.

When arriving at the position which I had roughly calculated as above the spot where we had seen the stag, we turned to our left, and came downwards, until we were in sight of Glen Tilt, and we could see the carriages with our entire party waiting in the road about a mile upon our right. The deer was not in sight. This was exceedingly awkward, as it looked as though he had suspected danger, and had departed.

My men did not think so; they thought that he had again lain down when the carriages turned

and were lost to view. It was the party which had disturbed him, therefore he had again reposed when the party was gone.

In this opinion I agreed; we accordingly held the dogs in readiness to slip immediately, and the gillie led the way. We were not kept many minutes in suspense; there was no doubt that the stag had been lying down, as he suddenly sprang up within 100 yards of us, and in the same instant the dogs were slipped. They had viewed him immediately that he sprang up from the heather and the broken surface of the hill-face.

This must have been a lovely sight from the carriages, although rather far for the unassisted eye. For a few seconds the stag took up the hill, but the hounds ran cunning, and cut him off; he now took a straight course along the face, towards the direction where the carriages were waiting below. The hounds were going madly, and were gaining on him. I now felt certain that he could not breast the hill at such a pace, therefore, instead of following over the rough ground, we made all speed direct for the bottom, to gain the level road. It did not take long to reach the welcome solid footing, and away we went as hard as we could go along the road, towards the direction of the carriages. As we drew near, we could see the hunt. The deer had passed the spot where our party was in waiting, but he now turned down the hill towards the river, with the two dogs within a few yards of his heels. Presently we lost sight of everything;

we pushed forward, passed the carriages, which were empty, as everybody had joined in the hunt, and, after running about a quarter of a mile down the road, we heard the bay, and shortly arrived at the spot where the stag was standing in the middle of a rapid, and the hounds were baying from the bank. No doubt the dogs expected to hear the crack of a rifle, and to see the gallant stag totter and fall in the foaming river, according to their old experiences. However, they were not long in doubt. Patting both the excited hounds upon the back, and giving them a loud halloo, I jumped into the water, which was hardly more than hip-deep, but the stream was very rapid. The stag, upon seeing my advance, ran down the bed of the river, and halted again after a short run of 50 or 60 yards. The two keepers had followed me, and Oscar and his companion no longer thought of baying from the bank, but being carried forward by the torrent, together with ourselves, were met by the stag with lowered antlers. I never saw dogs behave better, although for a moment one was beneath the water; Oscar was hanging to the ear. I caught hold of the horn to assist the dog, and at the same moment the other hound was holding by the throat. The knife had made its thrust behind the shoulder, and the two gillies were holding fast by the horns to prevent the torrent from carrying away the dying animal. This had been a pretty course, which did not last long, but it was properly managed, and in my opinion

ten times better sport than shooting a deer at bay.

I am afraid that Sandy Macarra never quite forgave me for that hunt. "Weel, you've just ruined the dogs for ever, and there'll be nae haudin' them frae the deer noo. They'll just spoil the flesh, and tear the deer to pieces." This was the keeper's idea of what I thought was good sport. Certainly the venison did not belong to me, neither did the dogs.

Deer-stalking in the Highlands is a tempting theme, upon which I have no space to dilate. It awakens recollections of keen excitement, and the kindness of old friends, nearly all of whom are gone.

CHAPTER XXIII

CERVIDÆ (*continued*)

NEXT to the red-deer is the fallow-deer (*Cervus dama*). Although this species is most common, it is declared by some to be not indigenous to Europe, but upon the authority of Cuvier it was originally introduced from Barbary. I should much doubt that fact, as the deer is not an animal that belongs to the African continent, and is nowhere found except on the north coast bordering the Mediterranean. It should therefore be more natural that the *Cervus dama* (platyceros of the ancients) was introduced into Barbary from Southern Europe. The great Sahara desert has intervened as though it were an ocean, and has completely prohibited the passage of the fauna from north to south, therefore the deer which are found in Barbary can have no affinity with the fauna of Africa.

The fallow-deer does not run wild in Great Britain like the red-deer, but is confined in parks. As late as 1835 there were large numbers that were unfenced in the New Forest in Hampshire, and I can well remember seeing them in 1832

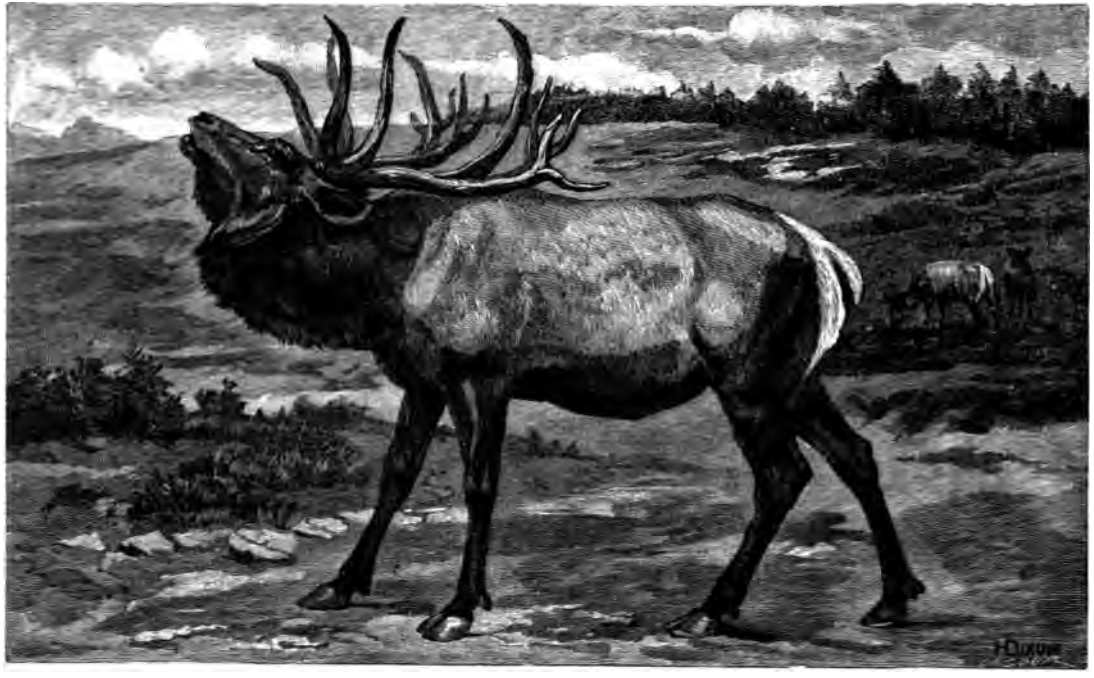
when I delighted in that forest, as a boy. I believe a few still remain, but the fallow-deer can no longer be accepted as a wild animal of Great Britain.

It is a beautiful species, and, as it is park-fed, and better sheltered during winter than the red-deer of Scotland, the horns have not deteriorated. These are very elegant in shape, being palmated, with many points. There is a difference of opinion respecting the quality of the venison as compared with that of the red-deer. I prefer that of the fallow-deer, but it is almost a crime to declare this in Scotland.

The third variety of British deer is the roe (*C. capreolus*). This small deer is about the size of an ordinary goat. Although the horns have only two tines, the quality is exceedingly dense, and the exterior is rich in small knobs; the roughness makes it particularly handsome. It exists in considerable numbers in Scotland, being generally found in thick woods where the ground is covered with very high heather. This animal is not gregarious, but is generally associated with one female, or is quite alone. The female carries her young for between five and six months, and has seldom more than one or two at a birth. The flesh is esteemed in Central Europe, where it is well larded with bacon, and prepared in a different manner from that in England; but I have always regarded it as dry, and most inferior game. It can hardly be classed as a sporting animal, as the shooting of a roe-deer

is upon a par with shooting a hare. It is common throughout Europe and Western Asia.

There are great varieties of small deer throughout the world, some of which are too insignificant for description, as I endeavour in this work to exhibit the characters and peculiarities of such animals as are generally accepted by the sportsman as attractive game. It is therefore a relief to take leave of the insignificant roe, and to cross the Atlantic, where we shall find the red-deer of Europe transformed by the favourable conditions of the country and its fattening pasturage into the gigantic wapiti (*Cervus Canadensis*).



THE WAPITI BELLOWING A CHALLENGE. VOL. II. P. 241.

CHAPTER XXIV

THE WAPITI (*CERVUS CANADENSIS*)

I HAVE already advanced the opinion that this superb species of deer is nothing more than the *Cervus elaphus*, or red-deer of Europe and Northern Asia, upon a larger scale; it exceeds them in a wonderful degree, not only in stature, but in the immense size of the antlers. A fine stag, when about ten or twelve years old, is a magnificent sight to any person who takes a pleasure in the study of wild animals. The colour is similar to that of the red-deer, but the rump is rather a lighter brown. I have never actually weighed or measured a wapiti, but from my experience in the exact weight of other deer of various species, I should say that the live weight would be from 900 to 1000 lbs.; the same animal would be $14\frac{1}{2}$ hands in shoulder height. It is found throughout North America, but, like other game, it has been so hunted that it has almost disappeared from localities where formerly it was plentiful, as neither sex has been spared in the warfare of extermination.

This splendid deer was at one time numerous in

the Sacramento valley, not far from the city of San Francisco, but it is now an animal of the past, although the town is hardly forty years old. Southern California affords every facility for the hunter, owing to the mildness of its climate, which enables him to shoot throughout all seasons, therefore the game has no rest. The wapiti is departed towards the north, where it seeks the shelter of the uninhabited wilderness, far away from the dwellings or pursuits of man.

Many persons, in their descriptions of game, forget the great distances that animals will travel when once disturbed. Accounts have been given to me by persons well accustomed to wild sports, who, having had the good fortune to be the first upon fresh ground, have seen an enormous amount of game. They have described this as impossible to destroy; "no matter how many gunners may start from England, the game would last for five or six years." These enthusiastic persons forget that although the game will not be actually shot, it will be driven away, which is almost as bad.

A week's shooting in a mountainous country, where the echoes of the rifle will be resounded far and wide among the hills, will disturb an incredible extent. Such long-enduring animals as deer will travel 30 or 40 miles in 24 hours, and they will quickly disappear. The presence of deer is seldom continuous in the same locality throughout all seasons. They are influenced by the pasturage, and the changes of climate: they accordingly are

well acquainted with a large area of country, perhaps extending for several hundred miles, through which they have been accustomed to range from the days of their birth.

The wapiti is a wide ranger, and I have no doubt that those which are met with on the Big Horn range in the State of Wyoming travel at certain seasons to the main range of the Rocky Mountains. All animals that are gregarious are migratory, especially if they are in large numbers. I have myself seen at least 300 wapiti in one herd, and I am quite certain that they went straight away from the Big Horn range, as I never saw them again, although I was riding great distances every day for several weeks throughout the country.

I have already described the character of the Big Horn mountains in the chapter devoted to the bear; it is only necessary to repeat that it resembles the Highlands of Scotland to a certain degree, upon an enormous scale, the mountains rising to an altitude of 12,000 feet above the sea-level, and the forests of spruce firs extending for many miles along the slopes. The superiority over Scotland consists in the firm character of the soil; there are no swamps or peat mosses, but fine grass, which forms a most fattening pasturage, and in many places the wild sage takes the place of Scottish heather. It may be readily imagined that such a combination forms the perfection of a shooting-ground. There are, however, considerable drawbacks. Although the climate is extremely healthy, the atmosphere is most

disagreeable, through the sudden varieties of temperature and the extreme dryness.

Our camp was generally about 10,000 feet above the sea. At that altitude the air is considerably rarefied, and the cold during night was extreme, in the month of September. In the day the sun was hot, and the wind was at the same time piercing: this was very trying to the skin, and although I was tolerably weather-proof, my face and neck were peeled from the harsh exposure. We had no other tent than an ordinary single cloth lean-to, about 7 feet square, and under 6 feet in height in the centre beneath the ridge-pole. A bed upon the ground, formed of the tender ends of spruce branches, and covered with a waterproof camp sheet, upon which were double blankets, would have been a luxury in a milder climate, but it was almost impossible to keep warm, as the cold was so intense that a pail of water exposed at night became a solid block of ice before the morning. The most welcome bedfellows were a few large rounded pebbles from the stream, about 10 lbs. each; these were well heated in the fire, and then wrapped in thick flannel: in the absence of a warming-pan, it was a simple arrangement that produced great comfort.

The extent of forest was very small in proportion to the open grass-land. Periodical fires appeared to have destroyed large tracts, and the blackened stems produced an aspect of painful desolation.

Where the spruce forests were unharmed, the signs of wapiti were very extraordinary. In

some places there was not a sound tree, as every stem had been used from time to time as a rubbing-post, to clean the antlers. This would be a proof that the animals were collected in vast numbers towards the end of the period when the horns were hardening, and the velvet required rubbing. The horns are clean in the middle of August; the animals would be there about the middle of July in their greatest numbers, but at that time they would not be fit to shoot.

The flies are insufferable until about 15th August, therefore the actual shooting season in the Big Horn is limited from that date until 30th September.

A man who never misses a day, but who is in the saddle from sunrise till sunset, will cover a large extent of country in a month, and there will be very little remaining after a shooting expedition of six weeks.

When I was there, a party of skin-hunters had obtained a start of a few days, and I was obliged to change my course in order to avoid them, as they had already disturbed a portion of the ground.

There was no attractive scenery throughout the Big Horn range; it was a great expanse of desolation. The finest spruce were not larger than those ordinarily seen in England; the cotton-wood, which in the low country grows to the size of a black poplar (which it exactly resembles), is dwarfed by the rigour of the climate, and is not thicker, nor taller, than a hop-pole. This grows in dense patches

of 8 or 10 acres upon the face of the slopes, and is the chief resort of the black-tail deer.

The game of this mountain range consisted of bears, wapiti, black-tail deer, bison, wild sheep (big-horn), antelopes, wolves, and foxes. Among the game-birds were the blue-tailed grouse and the sage-hen.

I had heard so much concerning the wanton slaughter of wild animals, that I determined not to leave the character of a "destroyer" behind me; therefore, although my sport would be limited by showing mercy, I made up my mind to abstain from shooting only for the sake of killing. By adopting this arrangement I should have a certain advantage, as I should not alarm the country by firing many shots.

The black-tail deer were not fit to shoot until the middle of October, as the horns were not yet clean. I regretted this, as their antlers are most peculiar, being curved, with a multitude of points, and although not large, they are exceedingly ornamental. This animal is about the size of a fallow-deer, the colour grayish brown, and the venison excellent. Owing to the disturbance caused by the skin-hunters, we saw no wapiti for several days. I was astonished, as the accounts that I had received had been most glowing. There were plenty of antelopes, all of which were as wild as hawks; and had wapiti been upon the open, it would have been difficult in some places to have stalked them, as the antelopes scouring over the

ground would have given notice of the approach of danger. Bison were very plentiful, but after shooting a fine bull, I only regarded them as ornaments in a natural park, and they were considered sacred. In several places they fed within a few hundred yards of our camp, without apparent notice. This was all very agreeable, but where were the wapiti?

There was no party beyond Lady Baker, myself, and our four attendants, with a number of horses and mules.

I had lent my hunter (Jem Bourne) a Martini-Henry rifle, but he was not supposed to shoot without permission.

Among our horses was a well-trained animal named Buckskin, who would remain any length of time standing, to await my return, if I dismounted to stalk a deer. This was a remarkably safe beast; powerful and steady, he never made a false step, either up or down a hill. I could shoot from his back almost as well as though on foot, as he never flinched, but stood like a rock. He was a horse that should endure for many years, as he never over-exerted himself; he preferred to be ridden without spurs. I forgot them once; but I never did again. On that occasion he was delighted, as he knew that he could arrange his pace according to his natural discrimination; he accordingly declined to go beyond a walk. As to digging the unarmed heels of riding-boots into his flanks, or thrashing him with a stick, you might as well bestride a garden roller and dig your heels into the

iron; you could not discover the stick that would affect him for more than a few seconds, neither could you "belabour" the animal without cessation.

The day that I forgot my spurs, we were riding along a valley; the left slope was wooded with spruce forest, the right was open grass. We suddenly observed a number of antelopes scouring down from the sky-line on our right, about 600 yards distant; these had evidently been disturbed, and as there were no hunters within many miles of our position, we could not conceive the cause. Presently, three large bears appeared, cantering along at a great pace down the grass slope, making all haste to reach the forest on our left. As they would cross our path, we had every chance of intercepting them by a quick gallop straight ahead along the bottom of the valley. Buckskin took a different view of the position: he knew that I had no spurs, and in spite of every exertion on my part, I could not induce him to increase his pace from an ordinary walk. I jumped off, and ran as hard as I could go, but as we were about 10,500 feet above the sea-level, I was soon out of breath. The bears did not appear to suffer from short wind, as they reached the forest before I could cut off their retreat. My man unfortunately rode a mule upon that occasion, therefore we lost our chance. Mine was a really clever horse; as a rule, I think a horse is next door to a lunatic; but Buckskin with spurs was as different from Buckskin without spurs as a steam-engine would be with or without fuel.

Although I liked this animal, because he carried me up and down hills without fail, I did not actually love him, because I knew that my spurs were my true allies, and that I could no more progress without them than a steamer without her screw propeller. Horses are contradictory creatures; some occasionally exhibit intelligence, especially when they are offered a feed of corn, and they do not refuse it, but they decidedly fail as examples of evolution; they have been the companions of mankind ever since the days of the creation, and they are no more civilised in the nineteenth century than when Noah took them into his ark.

There was a member of Parliament a few years ago (he was not the leader of the House of Commons) who thus defined the horse, in some debate upon Army Estimates, where cavalry remounts were concerned—"I have but little sympathy with the horse; I only know that it is an animal that bites you with one end, kicks you with the other, and makes you sore with its middle."

That "making you sore with its middle" brings the Mexican saddle to the front. For such countries as the Rocky Mountains, where no jumping is necessary, there cannot be a more perfect arrangement for horse and man than the Mexican saddle. This is totally opposed to European ideas. It is exceedingly heavy, weighing from 25 to 30 lbs. There is no stuffing. It is open by a longitudinal slit beneath the seat, which would suggest the idea that you certainly would suffer from a long ride. It

has a horn in front, and a high cantle behind. The stirrups are very wide, and are covered with leather; they are neither heated by the sun in summer, nor rendered cold in winter, as the bare metal would be. From different portions of the saddle, long strips of buckskin are suspended, which are most useful for lashing anything required to be carried.

The argument in favour of weight is, that the extent of the saddle covers the entire back of the horse, therefore the weight of the rider is generally distributed over a large area of the muscles, instead of being concentrated upon a small portion of the back. The slit in the seat ventilates the back of the horse and the posterior of the rider, therefore both are kept cool. The absence of stuffing is supplied by a small folded blanket; and owing to its peculiar shape, the tree of the saddle rests upon either side of the spine, instead of pressing directly upon the withers and the central line of the back.

When I was in San Francisco I hit upon a practical method for carrying the rifle on horseback. Mr. Davis, the saddler in that city, gave me great assistance. A strong leather case, that will receive the rifle as far as the bend of the stock, is secured through a broad strap (4 inches wide) of very thick leather, riveted with copper rivets to the flap of the saddle, which in the Mexican pattern projects in front of the knee. This arrangement is upon the near (left) side. When the rifle is in this leather case, fitting loosely, the case is forced through the retaining strap, which keeps it firmly secured against

the flap. A very strong belt of leather, fastened also with copper rivets from the upper and broad portion of the leather case, is buckled round the front horn of the saddle. The rifle is now represented as muzzle downward, perpendicular. The butt-end is about level with the arm-pit of the rider. His bridle-hand holds the reins inside, therefore, when he requires his rifle suddenly, he has only to grasp it with his right hand by the neck of the stock, and draw it from its stiff and firmly secured leather case, as though it were a sword being drawn from the scabbard. I have never seen any plan equal to this, as you can gallop through bush without the rifle being any obstacle whatever, and you can draw it in an instant.

I was riding along a ridge overlooking a valley upon my right, a few days after we had seen the bears, when I caught sight of a cotton-wood tree upon the margin of the spruce forest, that was shaking violently. At once divining the cause, I dismounted, and leaving my horse, I sat down upon the very steep grass slope, and thus shuffled along the incline until I was opposite the spot. I could see nothing, but after waiting for about a minute, I observed another cotton-wood shaking a few yards from the outside edge of the spruce forest. I knew that a wapiti must be rubbing its antlers against the yielding stem. The wind was in my favour, therefore, as I could not discern the animal, I felt that it did not see me; accordingly I crept along the ground until I arrived at the margin of the wood. Again the

tree shook, not 20 yards from me; still I could see nothing, owing to the thickness of the vegetation. I crept slowly towards the spot, and almost immediately I heard a tremendous rush; at the same moment I caught sight of a most glorious stag as he sprang down the hill, passing me within 15 yards.

As I pulled the trigger, I heard a sound as though a horse had fallen. The great rush continued, and was passing on my right. A few steps regained the open, and eight magnificent stags at full gallop passed me in single file within 60 yards. I put up the rifle, took the line of sight, and lowered it again without pulling the trigger, as I knew my beast was down. I watched these superb animals as they dashed across the valley and breasted the steep hill on the other side, almost with regret that I had spared them from the shot. I now re-entered the forest, and found my first wapiti lying dead. This was indeed a glorious creature, with a pair of antlers which looked like the branches of a tree. I would not have it touched, but I immediately rode to camp, about two miles distant, for my wife to come and admire this lovely specimen; at the same time I ordered the mules with their pack saddles, to bring home the flesh. When we opened this animal, the fat was several inches thick upon the brisket.

This was the commencement, and I could not help reflecting upon the absurdity of the situation. I had come a great distance to shoot, but the circumstances rendered indiscriminate shooting impossible to any person who was experienced in fair game. If there

had been Indian tribes, I should have been delighted to have shot for their benefit, but as the country was uninhabited, the shooting of those splendid wapiti was simply destruction. I could only restrict myself to a study of natural history, occasionally taking shots whenever the temptation was too strong.

In riding daily throughout the country, I was much impressed with the small number of cast horns which we discovered. Although they were scattered in considerable profusion, they were nothing compared with the rubbing marks upon the trunks of the spruce firs. Thousands of them were bare to the wood, over a surface of 4 or 5 feet; from the appearance, these were annual rubbing-posts, but all had been freshly rubbed during the last season. We seldom found a pair of antlers, generally only one; and the fellow was nowhere in the neighbourhood. This paucity of antlers denoted that the deer were not in this country in large numbers during the early spring, when the horns are shed. I can imagine that the bitter cold of winter to the end of February would drive every living creature to the lower ground; but where the horns are shed, I cannot explain. As the deer are migrating, it is possible that they travel to certain localities periodically, either for the annual shedding, or for the reproduction of their horns.

Upon two occasions only I came upon really large herds. I had been out all morning, but had only seen bison and black-tail deer. We were riding along the gentle incline of a glen, through which a rapid but shallow stream was flowing; there was an

object in the distance, that resembled the charred stump of a dead tree, within 50 yards of the right bank of the streamlet. The binoculars determined that this was a female wapiti.

She was standing in a narrow portion of the glen, not far from a cliff of bluff rocks 80 or 100 feet high; upon the opposite side, the hills rose to several hundred feet in a steep grass slope. The hind was about 1200 yards distant. We accordingly dismounted, and leaving our horses, I suggested that we should approach in the hollow upon the bank of the stream until within about 200 paces; my hunter would then stop, and I would continue along the bed, in order to gain a position exactly opposite the spot where the deer was standing. I felt perfectly certain that a stag, or perhaps more, would be lying down, as, though invisible, they would not be far off.

We accordingly commenced the stalk. We had not proceeded far, when the hind was joined by a large stag, which must have been lying down close to her, unperceived by us. Although the antlers were not bad, there was nothing particular in their size.

We advanced along the hollow of the river's bed until we were within 200 yards from the spot where the deer were standing. Occasionally we took a cautious peep above the bank to see whether they had moved. I now left my hunter lying down, with his head just above the bank to watch, while I waded down the centre of the stream, in the endeavour to

reach a bend, which would bring me within 100 yards.

The water was about knee-deep. I was progressing well, when to my astonishment I heard a shot. With considerable difficulty I clambered up the steep side of the bank, which rose 12 or 14 feet above the river on my right. There was a lovely sight; several hundred wapiti had crossed the stream about 200 yards ahead of my position, and were ascending the grass slope, struggling in a line of dense brown upon the yellow surface, making a rapid retreat across the hills upon my left. This large herd must have been lying down in the hollow unseen by us, owing to the rocks, and rough nature of the broken ground. It appeared, from the description given by my hunter, that shortly after I had left him to watch the hind, a stag had risen from the bushes in the neighbourhood, and the two had commenced a movement down the valley. As he knew that I must be unaware of the change, being far below the point of view, in the deep hollow of the river, he took a shot at the retreating stag. The report of his rifle immediately startled a great herd of these splendid deer that had been lying concealed somewhere in the valley, close to the borders of the stream, where there was a regular passage for wild animals. They had dashed across the shallow ford, and I had nothing to do but to abuse my companion for having fired the shot. There must have been three or four hundred deer in this herd, many of which carried superb heads. If

my man had kept quiet, I should most certainly have obtained a splendid chance; as it had happened, I could only admire the sight of these grand animals in rapid movement ascending the open slope until they at length reached the summit, and having crossed the sky-line they were lost to view.

I have no doubt that this fine herd travelled direct, and did not return to the Big Horn range during the remainder of the autumn season. Having crossed the shoulder of the mountains, they had a straight course down hill for 7 or 8 miles, and then a wild and uninhabited district for 60 or 70 miles towards the main range of the Rocky Mountains. From the direction they took, I feel confident this was the case, and their departure from our range was highly instructive, showing the direct effect of disturbance in driving wild animals away from a particular district. If these wapiti had been divided into twenty or thirty herds of small numbers, they would have been scattered over an extreme area, and have afforded permanent sport for many days; but the fact of their being collected into one vast herd would denude the country. A very large herd would probably travel a much greater distance than a smaller number. All masses and crowds are influenced by panics; the presence of many females with their young ones would increase the excitement of a retreat, and a march of only five hours would carry a herd of deer over an interval of 25 or 30 miles.

It appeared as though all the wapiti of the immediate neighbourhood had been gathered together in that large herd, as I could not discover one animal of the species for a couple of days after this incident; we accordingly moved our camp.

There is always a charm in novelty, and this is exhibited to perfection when, after a morning's march in the Big Horn range, a clear rippling brook in a shady glen, beneath overhanging woods of dark green spruce, invites a halt; here we decide upon the new camping ground, well sheltered from wind, with a supply of fuel, and good water. No shot had been fired within 10 miles of our new camp, therefore we had every reason to expect game.

On the following morning I rode out with my hunter Jem. The forests were difficult, owing to the number of fallen trees and the steepness of the mountain slopes; we accordingly ascended the mountain until we gained a tolerably level surface above the woods; this enabled us to obtain a clear view for some miles ahead, and to the sky-line upon the summit to our left. We rode parallel with the forest, upon the extreme verge, occasionally turning into it when level ground rendered it practicable; but although tracks were numerous, we saw nothing except black-tail deer. It is probable that many other animals were existing in the recesses of the dark forest, but for mounted men it would have been impossible to adopt any other course than that pursued.

Having reached a locality where the ground was favourable, we rode through a series of open glades separated from each other by belts of spruce and cotton-wood. This was a likely place for game. The surface was undulating, and the rich grass in the glades would afford pasturage, at the same time that the belts of trees gave shelter. We were riding leisurely through this promising country when I suddenly observed the branch of a dead tree move. I immediately checked my horse, and watched. Again the same branch moved at about 150 yards' distance. I dismounted gently. My hunter Jem, who was behind me, did the same.

I had seen at once that the object I had at first mistaken for a branch was the portion of a wapiti's horn of very large dimensions. The reins were now drawn over the horses' heads, and they were left to graze.

There was a small clump of green spruce firs upon a gentle slope on our right, and we concluded, according to the wind, that we should be in a safe position to obtain a shot if we could manage to reach such shelter undiscovered. Some rising ground concealed the wapiti, and now that I dismounted, I could not see the antlers.

My hunter had not observed them.

Making a detour to our right, we at length succeeded in reaching the clump of thick green spruce. Pushing our way softly through the yielding boughs, we gained the edge, from which

we had expected to obtain a view of the still hidden game.

There was a glorious sight; three immense stags, about 150 yards upon our right, were feeding in a direction that, if continued, would bring them across our position within 80 or 90 yards. The wind was favourable; we therefore watched.

One of these stags had stupendous horns, and as they slowly approached, I counted with my glass fourteen points. The others had twelve each. I was determined to possess that grand head.

They had now fed to within a distance of about 110 paces of our position, and the intervening ground was open. If I waited until they should be exactly opposite, they would be much nearer, but they would pass behind a clump of large spruce firs, which might almost obscure them. I could make quite certain of the shot at 110 yards, but I enjoyed the sport of waiting and watching, therefore I determined to let them cross exactly in front of my position before I would take the shot.

In a very short time they arrived upon the other side of the trees, and I at once saw the difficulty. However, I determined to be very careful in my aim, and to select the largest head. Somehow or other they appeared suddenly to get the wind of danger. Whether they smelt the horses I cannot say, but certainly they could not have winded us; they looked up, and around, and trotted past the clump. I immediately fired at the shoulder of the

biggest. I heard the usual well-known sound of the ·557 bullet; but the deer did not drop.

"He's got it all right," exclaimed Jem. "He'll drop directly."

I was of the same opinion, but all three stags continued to canter along as though unharmed down a gentle slope, jumping over the prostrate stems of fallen spruce, as though enjoying their power of active movement. At length they disappeared in a dark hollow about 200 yards distant, where some spruce firs grew in the depression of a stream bed.

On the other side of this depression was a small open slope of grass; this was bordered by the main forest. I had of course reloaded, but I could not understand the possibility of the wapiti having retreated to such a distance with the ·577 solid bullet in his shoulder.

I had now raised the back-sight for 250 yards in the expectation of seeing the three wapiti emerge from the hollow, and appear upon the clear open space before they could reach the forest. Although it would be a long shot, it would be absolutely necessary to stop the wounded animal, otherwise in all probability we should never see it again.

Presently a pair of spreading antlers appeared, as a fine stag slowly walked up the steep incline, and appeared upon the open slope. I raised the rifle to my shoulder. "That's not the one," said Jem. "I know that; hold your tongue," I replied, still keeping in readiness. Another stag appeared.

"That's not the one, either," exclaimed irrepressible Jem. Both these fine beasts entered the forest, and disappeared. I lowered my rifle. "He's lying dead in the hollow," continued Jem.

I began to think this was the case, but presently a grand pair of antlers appeared, followed by the stag, which slowly rose from the depression, passed through the fringe of spruce trees upon the slope, and emerged upon the open ground, over which it slowly walked, almost in the tracks of those which had preceded it.

I took a very steady aim, and fired. The great stag reeled and fell, just as the sound of the bullet upon impact returned to our ears.

"Well done! he's got it this time; that's a fine rifle and no mistake," exclaimed Jem, who immediately ran forward towards the distant prize. I followed slowly; as I stepped the distance, it was 240 long paces to the bottom of the hollow. I could not measure the steep slope, as I had to scramble up the bank, but taking the direct line of the bullet's flight it was about 250 yards.

We now examined the wapiti. This was indeed a prize. We knew that the first shot should have struck the left side, likewise the last shot; but there was only one bullet-wound; this was through the centre of the shoulder. We now cut it open, and grallocked the immense animal, to render it easier to examine. The bullet had gone through the centre of the heart; it had broken the shoulder on the opposite side, and had lodged

beneath the skin, expanded like a half-matured mushroom. This was pure lead.

No other bullet had touched that stag, and my first shot had been intercepted by the trunk of one of the numerous trees which had intervened between me and the animal when I fired.

This wapiti had the finest antlers that I have ever possessed, and the freak of nature had added two peculiar tines, which must have plagued the unfortunate proprietor. These turned in the reverse direction, therefore they must have acted like a grapnel in catching the branches of trees, when otherwise they would have been avoided in the usual manner, as the stag throws its head backwards, and elevates the nose in passing through a forest. Although the horns were perfectly clean and hard (29th August 1881), the extremity of one of the extra tines was round, instead of pointed; it was bloody at the tip, as a chronic inflammation had been set up through continual friction, and it had never thoroughly matured. We were powerless to do anything with this grand animal; we accordingly left it, until we could send men and mules from camp. Upon the following day, when we arrived, a party of bears had scratched a hole, and attempted to roll the wapiti into it. This was a glaring failure, as the animal was not half concealed. The bears had eaten all the inner portion, which we had laid upon one side; they had also eaten the soft extremities of the ribs, and brisket; but, beyond a quantity of grass and earth roughly thrown upon

the carcase by the claws of the bears when scratching, there was no actual burying.

The horns of this wapiti measured 53 inches in curve length from burr to extreme point, 12½ inches round the burr, 52 inches direct line from tip to tip of extreme points.

The day after this incident I had been riding with two of my people over the summits of the mountains, about 10,000 feet above the sea-level, when my attention was directed to a couple of fine stags, about three-quarters of a mile distant, feeding along the side of the hill-face downwards by an oblique course. Upon the opposite side of a deep depression at the bottom flowed a considerable stream. After watching these stags for some time with my field-glass, seeing that they occasionally raised their heads, and looked wistfully towards a copse which grew upon the opposite slope, on the shoulder of the mountain spur, I felt sure that females must be somewhere in the thicket. Accordingly I crept cautiously along the crest of the hill, until at length I arrived at the border of the covert. As I had approached the copse I had several times obtained a view of the stags; they were no doubt advancing, and would in my opinion cross the stream, and join other deer which, although invisible, were somewhere in the neighbourhood.

After waiting a few minutes, I discovered that a plot of open ground lay within the copse at no great distance; this I perceived through the light

which penetrated into the free opening. Upon reaching this, I found an area of about 2 acres perfectly free from bushes, but filled with rank grass and sedges, about 2 feet high. It struck me that the two wapiti stags would in all probability pass through this opening upon their arrival in the covert.

Hiding myself beneath a thick bush, from which I could command every portion of the open space, I waited patiently, having left my two men concealed, together with the horse, at a considerable distance.

Nearly half an hour passed away in expectation; I was cramped in my stooping position, and I slowly rose to stretch my limbs. As I stood upright, I caught sight of a pair of antlers just emerging from the thicket on my left. I slowly sank into my former position. First one and then another large stag issued from the wood. They walked very slowly along the verge of the thicket, occasionally halting to take a mouthful of grass, and feeding as they went.

When exactly opposite my position, I took aim at the leading stag and fired; at the same time I ran towards the spot. The bullet struck the shoulder, and the stag reeled to and fro, sometimes falling on its knees, and in this way blundered into the thicket, but fell dead just as I arrived. Hearing a great rush, and seeing that the stag was safe, I continued to run forward; within 50 yards I emerged upon the open, and found myself upon a hog's back sloping ridge of only a few yards'

width, while a natural fosse like a letter V, about 300 feet deep, lay before me; the opposite side continuing the steep slope to the summit of the mountain.

There was an extraordinary scene around me. A great mass of wapiti had burst from the jungle upon hearing the report of my rifle, and there was no room for them to stand upon the narrow area of the hog's back ridge. There were about 300 stags, hinds, and young ones of all ages mingled together, some of them being within 10 or 15 yards of me. They were determined to go forward, to effect which they were obliged to attempt the precipitous descent into the narrow bottom of the canyon, after which it would be necessary to ascend the opposite side.

This cleft was so abrupt that, although quite 300 feet in depth, it was not wider than 60 or 80 yards across the surface where I stood. I never witnessed a sight of such utter helplessness. It required great caution to descend, even for such practised mountaineers as wapiti. The herd shuffled down the precipitous incline of crumbling stones, causing showers of loosened rocks, which clattered with their struggling hoofs, as slowly and surely these heavy animals progressed into the dangerous bottom.

I sat upon a large stone that was close to the edge, and thoroughly enjoyed the scene. If I had been inclined to commit havoc, I cannot say how many I could have shot. As they slowly descended, I took aim at the back of each stag's

neck, and in imagination only, reckoned my slain. At length the herd reached the bottom, and the toilsome ascent commenced. When they appeared slightly below my own level on the opposite side, my sport recommenced : I picked out every big stag, one by one ; taking most accurate aim exactly between the shoulders, but never firing. A skin-hunter would have killed at least thirty in such an opportunity. The little ones were fatigued, and many of the smaller fawns were bleating like lambs as they struggled after their dams over the loosened rocks. At length they reached the surface, but even then they remained exposed, as the slope was exceedingly steep, and they were apparently too tired or too confident to increase their pace. By degrees they disappeared across the sky-line, and I never saw a large herd of wapiti again.

My men had joined me, and they were quite annoyed at my merciful behaviour ; however, I now led them into the thicket, where a splendid stag was lying dead. They were quickly employed in cleaning it, to keep the flesh sweet, until we could send for the head upon the following day.

There were some fine heads among the stags which I had allowed to escape, but none approaching in size to the last that I had shot.

Some days after this exemplary exercise of mercy, I had a very pretty quarter of an hour, which formed the only exception to my rule of never shooting at a second wapiti, if I had killed one upon the same day.

We had ascended from the glen in which the camp was pitched, and had reached the level plateau, which extended for several miles, bordered upon two sides by a continuation of the deep valley in a winding course. The stream in the bottom, together with good pasturage and forest-covered slopes upon the mountain sides, formed an attractive combination for game. It occurred to me that the animals would probably amuse themselves upon the open plateau during the night, and retire soon after daylight to the seclusion of the forest; therefore, shortly after sunrise, we found ourselves upon the level ground about 500 feet above the valley. The formation was peculiar; the plateau represented an immense terrace, as other ridges rose above it, until the highest point formed a prominent figure in the general outline of the landscape. Although the surface was sufficiently level for a horse to gallop at full speed, there were many slight depressions where the ground had been water-worn by streams during heavy rains or melting snows. Bears were regular visitors, as many of the flat stones had been turned over in their search for insects. There were tracks of wapiti, also of buffaloes and black-tail deer, therefore I felt tolerably sanguine of finding game in some of the ravines that opened upon this extensive terrace from the neighbouring hills.

As we rode leisurely along through the centre of this barren area, we frequently halted to scan the country with binoculars. Upon one of these occasions my attention had been attracted by a dark-

coloured object in the distance, which I imagined to be a bear, or some large rock which had deceived me by its resemblance. The glasses decided that this was a buffalo. It was more than a mile distant, but for simple amusement, as it lay in the direction we were taking, I determined to see if we could approach near enough for a certain shot. The wind was fair, therefore we took no precautions, but simply rode forward until within a distance of 1200 yards. I now made out that the buffalo was advancing in our direction; there was a dry bed of a stream before us, and I suggested that we should dismount, and conceal the horses and ourselves within this natural channel, to wait for the arrival of the buffalo. This was quickly arranged, and we descended into the river's bed.

By peering over the bank, I made out the exact direction that the buffalo was taking, and by changing my position accordingly, I had the satisfaction of seeing a fine bull approaching me, without the slightest suspicion of impending danger. Presently it descended into the channel within 40 paces of the rifle, which as usual I had pointed at the shoulder, without the slightest intention of pulling the trigger. The animal obtained my wind, or saw me, and with a snort it threw up its tail, and galloped off across the plain, leaving me quite satisfied at having bagged it mentally, without the expenditure of a cartridge, or the useless sacrifice of a life.

We remounted, and rode forward, scanning as

before every nook and corner of the country. We had not proceeded far when I made out another buffalo; this lay in our route, therefore without taking the trouble to notice it, we rode straight forward. When within about 300 yards it observed us, and turning away, it retreated across the open, making towards the direction of the higher ground.

We now observed specks moving upon the surface at so great a distance that I thought they were black-tail deer, until the binoculars declared them to be wapiti. A rigid inspection with the glasses proved them to be eight fine stags that were slowly trotting on before us, as though they had been recently disturbed.

It struck me that they must have seen the buffalo gallop off in retreat, and this was the cause of their disturbance. We followed at a canter, to keep them within our view, as I felt sure they would turn to the right, and seek the shelter of the forests upon the slopes, above the winding valley. In about ten minutes we had gained upon them considerably, and they had neared the margin of the plateau. As I had expected, they now disappeared one by one, as they descended to the lower ground.

We rode quickly to the spot upon which they had been lost to view: their tracks showed plainly the course of their descent. This was a narrow grassy slope interspersed with a few spruce firs, forming a division in the long dark foliage which clothed the hillside for a distance of many miles.

The opposite side of the valley was different in general character, as the hills, which rose to a considerable altitude and formed a wall, were not completely covered with forest, but on the contrary they were grassy slopes, only cut at intervals by ravines which had been scooped by water; these were clothed with spruce.

The bottom of the valley was not wider than 300 yards, and although it was more or less occupied by forest, there were many extensive tracts of open grass ground which afforded excellent pasturage; the little stream through this valley would ultimately flow through our camp, about 3 or 4 miles distant in our rear.

There was nothing in view when we scanned this valley with the glasses; accordingly we dismounted, to ease the horses in the very steep descent; we then followed upon the tracks of the eight wapiti towards the bottom.

Upon arrival at the stream, the tracks led across; upon the opposite side, after a search over a few hundred yards, we discovered the tracks of a large herd of these animals, among which those of our eight scared wapiti were confounded and utterly lost. It now became a serious question, "Where were they gone?" Having crossed the stream, I did not think they would have returned to the other side. They would not be likely to remain in the bottom of the valley. I therefore considered they would probably have taken refuge in one of the wooded ravines which scored the mountain's side.

We decided to beat out each ravine separately; this could easily be accomplished, as Jem could ride along the bottom when practicable, or, if not, he could ride or walk along the edge, and throw stones into the dry stream-bed. At the same time I would dismount, and keep 150 yards in advance, along the margin of the ravine upon the opposite side.

In this careful manner we beat out three ravines upon the right front of the spot where the wapiti had crossed the stream. There remained a large ravine which came from a shoulder of the mountain, that formed a hollow upon the ridge or saddle. I felt sure the wapiti must be hiding somewhere among these places. Telling Jem to wait at the bottom until I should have a clear start of 150 yards up the hill, I rode through thick sage-bush up the incline, until I reached the desired position. It had been agreed that Jem should whistle if he saw the wapiti within the covert. I did not dismount, as the sage-bush was exceedingly tough and disagreeable. I therefore kept my horse well ahead of the position of the beater, which I could tolerably guess from the clatter of his horse's feet among the stones. I was about half-way up the hill, when I heard a loud whistle!

I did not dismount immediately, but spurring my horse, I pushed forward straight up the hill as fast as possible. It was well that I did so; had I been on foot I could not have arrived at a good position; for although I had pressed Buckskin to the utmost, a splendid stag broke covert about 120 yards ahead

of me, and turning to my left, galloped across my front. By the time I had dismounted and fired, he was about 150 yards distant; but he fell almost immediately on his side, and although the body was invisible in the tall sage-bush (as I looked up hill), one antler stood high above the surface like the dead branch of an oak tree.[1]

Seven stags now broke from the ravine about 200 yards in front, and most unfortunately took a line of retreat parallel with the gully directly up the hill; thus nothing but rumps were turned towards me. Confident in the power of the rifle, I put up the back-sight for 250 yards, and took a steady shot. I heard the bullet strike, and I saw the stag run suddenly to the left, and then struggle for a few yards towards the sky-line, where it disappeared. The remaining deer halted exactly upon the sky-line, as though undetermined as to the course they should pursue. Several turned round, and from a distance of about 300 yards regarded my horse and myself. I put up the 300 yards back-sight, and fired at the chest of the foremost stag. Again I heard the bullet strike, but they all vanished from the scene beyond the outline of the hill-top.

Jem had now joined me, and I suggested that we should ride up the hill, but dismount before reaching the summit, as I fully expected to find the

[1] The antlers of this stag measured—
From extreme point in curve to the burr, 59¾ inches.
„ „ „ of backward bend of main antler to extreme point of longest front tine, 37½ inches.
Round the burr, 13 inches.

two stags which had been wounded at the long range. Accordingly, upon nearing the ridge, I cautiously advanced on foot, and taking a rock to cover the line of approach, I looked over a narrow shoulder of the mountain exactly in our front. There was a bare plateau of about 3 acres, beyond which were a few stunted spruce firs growing in a scattered group on the verge of the descent to the low country; some 7000 or 8000 feet beneath. Among the group of spruce there was a stag with a fore leg broken just below the shoulder. Another was standing upon the open about 150 yards from me, with its hind-quarters towards us, its legs wide apart, and its head lowered till the nose almost touched the ground. I knew the sickening effect of the solid ·577 bullet, and I could see that this was the shot in the hind-quarters which had raked the poor beast fore and aft. Although I could depend for extreme accuracy upon the ·577, I told Jem to hand me my Martini-Henry which I had lent to him, as I wished to prove its reputation—we therefore exchanged rifles, and carefully turned to the right, in order to see the stag in any other position than the rear. It did not appear to notice us, and upon reaching a spot where the neck was plainly visible, the Martini-Henry dropped it dead.

We now advanced towards the clump of spruce where the stag with the broken leg had been seen upon our arrival on the crest. Unfortunately the last shot fired had started it at full speed down the hill, in spite of the broken fore leg. I ran to the

edge of the ridge, and caught sight of this splendid animal several hundred yards below us, cantering down the rocky slope with the right leg swinging from the shoulder—a pitiable sight which grieved me sadly, as it was hopeless and impossible to follow it.

My only consolation was, that throughout my trip in the Big Horn range this was the only animal that was wounded without being killed.

After watching this stag until it disappeared from view, I returned to examine our two dead animals. The first was near us. I found the bullet-hole in the hind-quarters, as I had expected; but I know nothing of its course, as we had no time to dissect it, having a finer stag to clean below us, the first that I had shot. We accordingly descended, and having led our horses to the spot, we took off our coats, and determined to cut up the stag, as it was wonderfully fat, and altogether a beautiful specimen of a wapiti.

We had partially flayed this animal, and were stooping over it, engaged in the occupation, when a peculiar sound of something *pinging* in the air above our heads, accompanied at the same time by the report of a rifle, startled us from our work. Almost immediately these ominous sounds were repeated, and a third shot in rapid succession caused my hunter Jem to exclaim, "Look out—Indians!"

Another shot followed, and several in rapid succession, before we could even guess the direction from which they came.

As we stooped over the deer, we faced the valley

below us; our backs were turned towards the ridge or summit of the hills above us. We were standing upon a spur that ran from crest to valley-bottom; upon our right was an amphitheatre, a regular horse-shoe of high cliffs forming the outline of the ridge; a terrace slightly below our level, with only a few places where it would be possible for horses to descend from the highest point above. We now observed mounted men scouring along the sky-line, evidently looking for a passage to the lower ground. At the same moment my eye distinguished what I at first supposed was a runaway horse, which was galloping along the auditorium of the amphitheatre. In another instant I perceived that this was a wapiti stag with large antlers, coming in our direction, and I felt certain that it would cross the saddle of the hill-top above us, from which we had just descended.

Jumping into the saddle, I gave Buckskin the spurs, and hurried up the hill to arrive if possible below the saddle, on the right, to intercept the stag. Jem followed, and by dint of the sharp rowels I managed to force the lazy Buckskin up the steep incline, and to gain the hollow in the ridge through which I felt sure the wapiti must pass. I jumped out of the saddle when within 100 yards, and a few paces on the lower side of the hollow pass. Hardly was I upon my feet when the large antlers and head and neck of the stag appeared at full speed, tearing through the open space. I fired, but I saw the dry earth fly a few inches short, as the bullet

struck the top of the bank which concealed the body of the stag, but exposed the neck and head above. In another instant the stag was flying through the pass, and thoroughly in view, as he coursed towards the lower country, where he would be free from his pursuers. The left-hand barrel nailed him. The bullet struck fairly in the centre of the shoulder, he turned a complete somersault, and was stretched dead in his fullest speed.

This was uncommonly pretty. It was the most dramatic incident I have ever witnessed in a long career of sporting experiences. I had shot three splendid stags, and wounded a fourth, all within a quarter of an hour. This last stag was an unexpected mystery; we knew nothing about it, neither had we the least idea who the people were who had evidently been firing at it, when the bullets whistled above our heads. In this uninhabited wilderness there was as much chance of meeting a human being as a gorilla or an ourang-outang. Who were those people who had been seen on horseback on the sky-line?

The best way of discovering them was to use the glasses, therefore we ascended the saddle-back pass, through which the stag had rushed, and then tried the binoculars.

We now distinctly counted five white men mounted upon horses; while several other white and men a large number of pack animals were carefully descending the steep incline to follow those who had already reached the lower ground;

these were hurrying towards the spot where they had heard the two shots I had fired. These people would be as astonished as ourselves at meeting white men when least expected, in the wilderness of the Big Horn range. We now stood upon the ridge, which at their lower level would be the sky-line in their point of view.

In a few minutes they arrived. Our salutations were quickly exchanged. "Here lies your stag, and I am glad to have stopped it," I said. "It was wounded of course, was it not?" demanded one of the party. "Only one bullet has touched it, and that was the last," I answered.

They all dismounted, and examined the beautiful beast as it lay stretched upon the ground, like a picture. "We shall be thankful for a little venison, as we have tasted nothing but bacon since we left Cheyenne seven days ago," said the first spokesman.

I now explained to them that the stag before them was the third I had shot within about a quarter of an hour, and that it was by a mere chance they had driven this animal across my path. They were welcome to the horns of this stag and the flesh of all three beasts, if they required them for their party.

We quickly made acquaintance, and they accompanied me to look at the other two wapiti. I advised them to camp immediately below the hill, as there was good water and fuel upon the spot. It would be easy to cut up the deer, and carry the

meat that short distance; this would save them much trouble.

They were delighted with the idea, and we proceeded to the lower ground together, to select a camping place. During the way, they explained that they were a party bent upon a riding excursion from Cheyenne through the Big Horn range, but they had been most unfortunate in shooting, having seen very little game, and having killed absolutely nothing. This was a curious episode that was equally unexpected, and at the same time satisfactory to all parties. In a short time they had their tents pitched, fires alight, cooking-pots filled, and were thoroughly comfortable, while my hunter Jem and myself rode homewards, well satisfied with the morning's work.

On the day following, I rode from my camp with the intention of calling upon these American gentlemen, and, as I approached their direction, my attention was attracted by a cloud of smoke rising from the valley in which I had left their party. Presently I was overtaken by Bob Stewart and Big Bill, the skin-hunters, who had observed the signs of a forest fire from a great distance, and had hurried towards the spot, carrying with them a galvanised iron bucket and an axe. We now joined parties and galloped towards the smoke.

Upon arrival we found the desolate signs of a deserted camp. The large party that I had left on the preceding day were gone, and with great carelessness they had left their fire burning, instead

of extinguishing it before departure. The strong wind had blown the sparks into the inflammable mass of dried pine needles, with which the ground was deeply covered; this was blazing in various places, having already communicated the fire to several of the dead trees which strewed the surface.

It was a curious example of inflammable material *en masse*; everything seemed prepared for ignition, as though a natural depot of lucifer matches. In more than a dozen different places the ground was on fire over an area of half an acre; these isolated patches were spreading with great rapidity, and upon arrival at a spruce tree, the flame ran up the bark with surprising avidity, licking up the surface in forked tongues, and, when reaching the branches (if withered), it seized upon the fresh fuel, and flared with horrible vigour. This showed upon a small scale the commencement of a forest fire, which would quickly extend into a terrible conflagration.

We were fortunately at hand to extinguish the danger in its birth, but we had to work hard for at least a couple of hours before we could accomplish our work. The stream ran through the centre of the forest, and as Bob Stewart had brought a pail, he devoted his attention to damping out the ground fires. We cut large branches of green spruce, and dipped them in the stream; with these we beat out the flaring edges where the pine-needles were in a blaze, or smouldering. It was annoying to see how new spots of fire appeared, apparently by magic, as there was

no perceptible cause; the wind carried sparks which were invisible in the bright sunlight, and these ignited wherever they fell, as though they had adhered to tinder.

Two or three large spruce were blazing among the branches, although unharmed below. These were, after much labour, felled, and the fire extinguished. None of our party desisted from our hard work until every spark was extinct, and I wish that the unsophisticated strangers who had caused the trouble had been present, not only to aid in the labour, but to benefit from the curses that were levelled at their backs, for setting a forest on fire by such gross carelessness. Our people declared with much force, that if we had not been in the neighbourhood to extinguish the fire at its commencement, the whole of the slopes would have been consumed, which I had termed the "ten mile forest."

On 6th September we had a fall of snow. For thirty hours the flakes fell without a moment's cessation. There was not a breath of wind, and the entire surface of the country was covered, to the depth of 8 inches, with the winter's garment. This was extreme misery; we had only two apologies for tents—one for the four men, a similar pattern for ourselves. It was dark when we awoke in the morning, through the deep coating of snow which lay upon our roof. Presently the flat battens which did the service of tent-poles collapsed, and down came the tent upon us as we lay upon

the ground, buried beneath canvas and a heap of snow.

This took a considerable time to rearrange. Fortunately Henry (the German cook) had made a large quantity of hot coffee; this he slipped beneath the tent-wall, and we never enjoyed anything more delicious.

Having mounted my horse, accompanied by Texas Bill, I rode throughout the whole day over a large extent of country, as the new sheet of snow would be a tell-tale guide to the game that had moved since the fall.

I returned much dissatisfied; my eyes were terribly inflamed by the glaring surface; my face and neck were blistered, and we had seen literally nothing except a solitary bull bison and a few black-tail deer. It was time to retreat, as the Big Horn range had been thoroughly disturbed.

Leaving instructions that the camp was to follow, on 8th September Lady Baker and myself started, without any attendant, across the mountains for a ride of about 20 miles to the ranche of Mr. Peters, in accordance with the invitation they had kindly given us, to pay them a visit upon our return.

There are few portions of the world so utterly trackless as the wilds of America. In Africa there are generally traces, or paths, although insignificant, which mark the natives' routes from one village to another; but in the prairies, and throughout the mountains in America, there are no inhabitants,

accordingly there is a total absence of the footprints of mankind. My men were under the impression that we should not find the direction of the Peters's ranche. Instead of this, after a ride of about four hours, we arrived at a point from which we looked down in a direct line upon the Powder river valley, and with the unassisted eye we could see the log-hut and the small surroundings which marked their settlement. We halted to enjoy the view, being rather proud that we had found our way without a guide. Suddenly we heard a rattle: this was immediately repeated loudly, and we observed a rattlesnake about 4 feet in length coiled upon the ground within 5 or 6 yards of our horses' legs. This horrid reptile seemed very angry at our intrusion, and after hissing with its tongue and rattling with its tail, it extended itself and glided viciously towards us.

I did not wish to fire, as my wife's horse disliked the report of a rifle; we therefore left the snake in possession of the field, and commenced the descent that would lead us to the Powder river valley. Had my men been present, they would have enjoyed our confusion. Although the Peters's dwelling was in sight, we could not discover a route for our descent. The sides of the mountain appeared fairly arranged in a series of inclines, but after marching three-quarters of a mile, we were suddenly confronted by a precipitous canyon which extended for an unknown distance in a deep chasm.

It was necessary to reascend the slope and

try another spur. When we regarded the numerous slopes, or spurs, which appeared to be natural pathways to the valley some 4000 or 5000 feet below, it was difficult to believe that they were alike intersected by canyons, all of which were the result of earthquake disturbance at some distant period which had split the mountain horizontally. We were delayed for more than an hour in marching and counter-marching, until it seemed as though we were hopelessly cut off from the home that lay snugly in the valley before our eyes.

At length I remarked a wooded slope rising higher than the rest; this was shaped like a wedge, and continued from top to bottom of the mountain; I felt sure that an uninterrupted descent would be obtained, could we only manage to climb this lofty ridge. We accordingly cut across a number of depressions, in one of which we came upon a fine bull buffalo which was asleep beneath the rocks. I would not shoot it, and we watched the easy manner with which this massive animal traversed the rocky ground, and climbed the steep gradients with the comparative activity of a goat. Our horses were good, but it was as much as they could do to breast the steep ascent, which at length brought us to the summit of the wooded ridge. This was a curious buttress of the mountain; it was not 80 yards in width, but a well-marked track, and numerous chippings from the axe showed that persons from the valley had been here to fell the spruce, probably

to construct the Peters's hut. Our difficulties had vanished, and by an easy path we descended to the valley, waded through the river, and shortly were welcomed by our kind young friends, Mr. and Mrs. Peters, in the rough log-house that we had seen from so great a distance.

The ranche life must have been delightful to young people who were only recently married, and were newly launched upon the voyage of their future life. It was complete independence. The log-house was confined to the ground-floor. There was a good-sized room, or hall, which formed the entrance; on the right and left were two rooms that formed either bedrooms and dressing-rooms, or single rooms, as occasion might require. A kitchen and a small pantry were at the back of the entrance hall; and I am not sure where a Dane and his wife (the servants) existed, together with their very fat and exceedingly red child of two years old.

Late in the afternoon our people and camp arrived, but we felt a palatial luxury in our hospitable quarters, after the cold and cramped accommodation of the pigmy tent. Curiously enough, our people had not only passed over the barren portion of the mountain, where we had see the vicious rattlesnake, but they had also met it in the same spot and killed it.

The locality was well chosen for a settlement by Mr. Peters, and I trust he has succeeded as a rancher. The grass was good, and there was

no danger of interlopers upon any side but one, as the Big Horn range ascended abruptly immediately from the opposite side of the Powder river.

The blood-red sandstone cliffs which arose in perpendicular blocks for 200 or 300 feet in height from the Powder river were very striking, as they formed a strong contrast to the glaring white of the surrounding soil. The Powder river flowed beneath the cliffs, and occupied a considerable portion of a swampy valley when in flood; this was covered with willows, growing so thickly together that they were difficult to penetrate.

Although the Peters's settlement was situated in a valley, it was about 6500 feet above the sea-level; nevertheless we felt a great difference in the climate, as we had been at 10,000 to 11,000 feet during the last three or four weeks.

It is very delightful to associate with young people who, having selected their profession, courageously seize the handle of the plough to strike a furrow that shall lead to fortune. We may meet the same persons in conventional life, the lady perhaps outshining others in the drawing-rooms of civilisation, yet we know but little of the real character until we find them in a situation which calls forth the energy and abilities of their true natures.

Mr. Peters had an English partner. He also was a man accustomed to the luxury of clubs in

London, but he now devoted himself to hewing wood when it was required, fetching water from the spring if he wanted it, and in doing everything in America which he never had been called to do in England.

It was a healthy existence. They all enjoyed their youth and strength. There was no doctor for several hundred miles; no clergyman; no church; no cemetery;—but plenty of fresh air and occupation. No person drank anything but water, unless tea or coffee. A few years before our arrival there was plenty of game among the willow thickets bordering the Powder river, and venison could always be obtained from the black-tail and white-tail deer without much trouble; but continual shooting had driven them away, and although the animals existed, they had become both scarce and wary.

There was no garden, as there was not sufficient rain; and labour was not to be procured for love or money. It was cheaper to purchase fruits and vegetables prepared in tins in California than to attempt the production by home industry. These were at the same time dear, owing to the great expense of transport for about 240 miles from Rock Creek station on the Union Pacific Railroad.

Living was primitive under these conditions, and we were much afraid that, notwithstanding our friends' warm hospitality, we must put them to a certain amount of inconvenience.

The morning following our arrival, a man arrived in charge of three mules laden with baggage. This

was an extraordinary event, and everybody rushed out to meet the stranger, directly that his approach had been reported.

"Who was he?"—"What was he?"—"Where did he come from?"—"What baggage was that?"—"Where was it going to?"—"Was anybody coming?" All these questions were put without waiting for a reply; until at length the mule-driver spoke; his words produced utter consternation.

"Well, all I know is this. For the last week I've done nothing but haul baggage for a lot of British lords and ladies, and this is some of it in advance. A lot more is on the road, and there's a heap of 'em all coming here to-night to dine and sleep, and maybe stay a few days before they go up the Big Horn to shoot."

"British lords and ladies! A lot of 'em coming here to-night to dine and sleep, and maybe stay a few days!" murmured our kind hostess in deep despair. "Impossible; it can't be true; who are they? Have you got a note?"

"No, I haven't got a note, as they said you'll understand. Let me see, I think I can recollect some of their names. There's M—— and his wife and sister; there's a Captain and Mrs. G——; that's five. There's Lord M—— and the Hon. Mr. L——; that's seven. There's Mr. P—— and Mr. B——; that's nine. I don't think there are any more, but perhaps there may be: I guess that's about enough to crowd you up, isn't it?"

The first shock of this sudden intelligence was

terrific. It appeared impossible. How could they be fed or housed? The idea was stupefying. British lords! ladies! an addition of nine to our already large party of five, in a wilderness which produced nothing, except a store of canned vegetables, and bacon! It may be imagined that our hostess was appalled, and for the moment prostrated by the announcement.

A dead silence ensued; during which a general determination was preparing to grapple with the difficulty. A dinner for British lords and ladies would necessitate soup, fish, entrées; some pièce de resistance, game, sweets, and dessert.

"We'll manage it, if possible," replied Mrs. Peters; "but we must all help. We must sweep out the entrance, and make a large table with some planks. With a nice clean table-cloth, who will know? We can gather some wild flowers and coloured berries, and make a pretty decoration. We have soup in tins. Now we've got our table ready, and the soup. My husband and Mr. Alston have a net, and they must catch fish; there are plenty in the river. We must kill a calf, and have veal cutlets, and a heap of dishes out of that. We must open some cans of vegetables; tomatoes and cutlets will make a capital dish. Preserved pears and thick cream; stewed peaches; but we have no game." I modestly suggested that I might ramble through the willows, and perhaps get some wild ducks. The idea was at once seized upon, and every member of the party set to work to carry out

his or her share of the arrangements. But where were they all to sleep? I had two small tents and camp-beds. The ladies could sleep together in a room, and the men must lie upon the floor on mattresses and blankets for one night.

There was a great bustle in the little establishment. Peters and Alston cleared away packing-cases, boxes, and a heap of articles that occupied the hall. Both these energetic workers were quickly armed with brooms, and the room was thoroughly swept out. A table was cleverly arranged. Mrs. Peters produced a beautiful new table-cloth, which was in itself an emblem of civilisation, and my wife and her hostess then sallied out to search for some wild plants to decorate the table. There were wild hops in profusion, growing within 150 yards of the house. Berries of bright red, and coloured leaves were found, all of which were prettily arranged in designs which reminded us of home.

I left this domestic felicity, and took my gun in search of wild-fowl, while Peters and Alston went off with a scoop-net to catch some fish. They knew a particular pool about half a mile distant which would yield a good supply.

If a photograph had been taken of the operation, these two young men would have represented ancient Britons without the ornament of woad. They stripped themselves quite naked and entered the pool. The first step, or rather "plunge," consisted in disturbing the water, when a particular

kind of fish known as a "sucker" at once retreated in shoals beneath the hollow bank. The waders, or bathers, then advanced, and thrust the net into the dark recesses of the asylum, pushing the hoop of the net to the bottom, and gradually raising it towards the surface. In this manner they captured a large number of good fish, from half a pound to rather more than a pound each. I did not witness this operation, as I was occupied in searching for wild-fowl along the marshy borders of the Powder river.

Having several times crossed and recrossed the river by walking rather more than knee-deep, I had come to the conclusion that my subscription to the dinner would be rather invisible, and I should feel ashamed to be present at the table without having at the least presented my hostess with a couple of ducks. I was in a state of natural despondency, when I observed high in air a flock of wild-fowl, probably disturbed by our fishermen, which, from the circular direction of their flight, evidently intended to alight somewhere among the willows. In a few minutes my conjectures proved correct, and I marked them down as nearly as possible near a clump of large cotton-wood trees that grew on the margin of the stream about a quarter of a mile distant.

With the greatest caution I approached the spot. The river had formed several pools, which resembled small ponds of 50 or 60 yards diameter, among the willows. Carefully

wading to avoid the sound of splashing, I worked my way through this excellent cover from pool to pool, when to my intense delight I saw a flock of about a dozen widgeon within 40 yards of me; they were huddled together, and offered exactly the character of mark that I desired when shooting for the pot. I fired into the centre of these unsuspecting birds, and five lay either dead or kicking upon the surface; another fell to my left-hand barrel. Instead of rushing forward to secure them, I reloaded instantly, as I expected that the remainder of the flock would swoop over those which were still struggling. This they immediately did, and offered a splendid shot, two more falling to a right and left.

This was indeed good fortune. I hunted up and secured all my widgeon; and twisting a delicate osier, I tied them in two bundles of four each, and trudged towards home, enjoying in anticipation the delight that such an addition would be to our good hostess.

Late in the afternoon there was a cry of distress. We had all been so thoroughly engaged, including the Dane and his wife (who did the cooking), that no one had missed the red-faced child. The frantic mother had now discovered that her two-years-old boy had disappeared. This was a mysterious announcement, as it seemed impossible that anything could disappear upon an open prairie. Every-

body was rushing about in all directions, and the mother at length became hysterical and began to scream. There were no wolves, and there was no possibility of any hurt befalling the child, unless it had gone away and fallen into a pit. At length we perceived Peters returning from the prairie with a bundle in his arms. He had found the vermilion-coloured boy sitting in a running stream nearly half a mile from the house, in which he would probably have been drowned had not his screams been heard by Peters, who had searched in that direction. The tumult ceased.

Towards evening all was in readiness—tents, beds, mattresses, a good dinner, and as pretty a table as could be found in an English dining-room. The guests arrived in separate detachments; probably from an excess of modesty, which would have felt the strain of a sudden and unexpected influx of nine visitors, some of whom were perfect strangers.

I do not think any person who was present will forget the kind hospitality of that evening, and the clever manner in which such an impromptu entertainment had been provided. The sleeping accommodation, although rough, was clean and comfortable; but, just as we were about to retire for the night, a most insufferable and overpowering odour pervaded every corner; it could not be called a bad smell, it was an awful stench. "Skunk," two or three experienced voices at once explained. It was indeed one of

these disgusting animals which had entered beneath the floor. Windows and doors were at once thrown open, the floor was beaten with sticks, and as much noise made as possible to drive the intruder out. This had the desired effect, as after a time the smell subsided, and by burning pieces of pine wood the atmosphere regained its sweetness.

The skunk (*Mephitis*, Cuv.) is an extraordinary creature, somewhat resembling the badger, and I cannot understand why nature has arranged that an animal so lovely should be so repulsive in its odour. The size is that of a small cat. The skin is a jet black of beautiful texture, long, furry, with white longitudinal stripes, one upon either side. The tail is of sufficient width and length of hair to completely conceal the animal when upraised.

The trappers declare that if a skunk bites a dog it will die of hydrophobia; this I do not believe, but if a dog were to bite a skunk, it might possibly die of sheer disgust, as it would never get rid of the horrible effluvium. It is an animal that feeds, like the Herpestes, upon almost anything it can obtain in the shape of insects, eggs, flesh, or animal matter generally. It has the power of emitting, when excited, a peculiar secretion which causes the well-known stench. I have shot several, but no person could be prevailed to skin them. On one occasion I was obliged to light a fire above the body to cremate

it, as the camp was down wind some 60 yards below, and it was impossible to endure the smell even at that distance.

Along the banks of the Powder river the white-tail deer are still common (*C. Virginianus*), although much reduced in number since the establishment of cattle ranches. They are rather smaller than a fallow-deer, and are excellent as venison, though in my own opinion inferior to the black-tail.

I was unfortunate, during my sojourn in the Big Horn, in not obtaining a specimen of the Rocky Mountains ram, or "Big Horn." I saw ewes upon several occasions, but I would not fire at females.

CHAPTER XXV

THE SAMBUR (*C. ARISTOTELIS*)

THIS is the largest of all deer, excepting the moose and the wapiti. The stag stands about 13½ hands at the shoulder, and weighs when alive from 560 to 600 lbs. I have weighed them both in India and in Ceylon. The horns of this species vary to a great degree, according to the localities which the deer inhabit. They are not shed annually, but with great irregularity every third or fourth year. This has been established as a fact by those which have been for some years kept in confinement, and it is generally accepted by all natives who are experienced shikaris. During eight years' hunting in Ceylon, I killed a vast number of sambur throughout all seasons, and there was no particular month when the antlers were shed; the deer were found with horns in every stage of growth, irrespective of periods or localities.

It is a curious fact that I never saw a stag sambur absolutely without horns, although during seven years I was continually hunting them with a pack of hounds. I have already mentioned under

the heading of "The Boar" the number that is written in my diary kept at Newera Ellia in Ceylon from October 1851 to March 1854. One hundred and thirty-eight sambur were killed with the hounds and hunting-knife. It may safely be asserted that we killed an average of sixty every year, which would yield the large amount of four hundred and twenty during seven years.

Allowing only four hundred as my personal experience of sambur in Ceylon, where the hounds made no distinction of sex, but ran the first scent they came across, it is very extraordinary that we never found a stag which had so recently shed its horns that only the base remained.

They were constantly met when in velvet, sometimes only a few inches in length, but never completely barren, to prove that the antlers were only just discarded.

We certainly proved that no season dominated the necessity for shedding horns, but the question of durability remained undecided. Since that time I have come to the same opinion as the natives, that there is no fixed period for the duration of a sambur's antlers.

Although the horns of sambur are sometimes large, I cannot admire them as graceful examples of a deer's antlers; they have only three points each, forming a total of six, which gives a barren appearance to a large head.

There are several deer in Asia which are limited

to six points—the sambur, axis (cheetul), and the hog-deer (*C. porcinus*). I do not accept the bara singh of Cashmere as a separate species; it is simply the red-deer (*C. elaphus*) of Europe. If we banish that deer from the list, we have only the swamp-deer, that represents a species with more than six tines. The swamp-deer is also termed in India "bara singh" by the natives. This much resembles the red-deer of Scotland, and is about the same size; ten and even twelve points are not uncommon, but the horns are seldom massive. I have been unfortunate in not obtaining a good pair. Although I killed five stags in 1888, there was only one head worth preserving; this has ten points, but it lacks weight; nevertheless it is far handsomer than those of sambur.

I should feel inclined to link this species with the true red-deer, although I believe it has been decided to be distinct. I feel sure that should an average swamp-deer be killed, or introduced among a herd of red-deer in Scotland, no person would remark any peculiar difference. The swamp-deer is found, as its name would imply, in the neighbourhood of well-watered plains, or valleys, where surrounding forests at all seasons afford a shelter.

The sambur has totally different habits.[1] This grand animal is fond of rocky hills and steep mountain ranges, among the gorges of which it

[1] Although the sambur delights in rocky hills and the roughest country, it is also fond of a mud-bath in a neighbouring swamp, where it will wallow like a buffalo or pig, especially during the hot season.

retires during the heat of day. Like most wild animals it is nocturnal, and will wander great distances to obtain some favourite food. It is a terrible nuisance to the cultivator, as no ordinary fence will secure the crops; the sambur will overleap anything below 6 feet.

When the cinchona was introduced into Ceylon it became necessary to protect the young plants by wire fences, as the sambur committed great depredations in the young plantations, although they ceased to eat the leaves when the plants became old. Although this deer exceeds all Asiatic varieties in weight, it is one of the most active. It is a beautiful sight to watch the irresistible rush of a sambur stag down the steep side of a rocky forest-covered hill, when it breaks back through the line of beaters. The animal, weighing nearly 600 lbs., descends at full speed an incline that it would be impossible for a horse to clamber, even without a rider.

It is the game most beloved by the native shikaris, who thoroughly understand its habits. Some of these men are deadly shots in their peculiar style of hunting, and it has recently become necessary to enact special laws throughout the Central Provinces of India, nominally to protect the wild animals; but I much fear they will favour the native shikari, who never will be captured in the act, while they will irritate needlessly the European, who would otherwise shoot fairly.

A sambur stag is not fully developed until ten years old; that is, in the full growth of body and

antlers. As it takes so long an interval to arrive at perfection, it is necessary to protect the young stags during their growth. This has never been done; accordingly, it is a general complaint that a dozen stags may be shot, without one head that is worth preserving as a trophy. It is an ordinary occurrence to hear European residents in India converse upon these subjects as though they abhorred the idea of shooting females and half-grown animals; but although I have been in their company upon many occasions, I have seen them fire at females with as little compunction as the ordinary native shikari. I can safely assert that I never do such an unsportsmanlike thing myself, unless absolutely compelled through want of meat for the people, which is seldom the case in India. Throughout the whole of last season I did not fire at one female of any kind; and the year before, I only killed one doe, to feed the Ghond beaters, who had joined me from a considerable distance. If people would regulate their shooting by the rules of sport in civilised countries, there would be plenty of game in India; but the Government authorities are now locking the stable-door when the horse has already been stolen.

Three years ago, in a portion of the Damoh district in the Central Provinces, I was shooting through a wild range of hills from Kotah to Ghât Piperia, and thence to Soonbarro. I was accompanied for about a month or five weeks by Bhopal

Singh and his two brothers, Gholâb and Dholâb Singh. We killed forty-three sambur, and had I chosen to take females, I could have added ten or twelve to the already cruel butcher's bill.

It is seldom that I have met such dead shots as these brothers Gholâb and Dholâb. They were armed with ordinary matchlocks; these were about 6 feet in length, smooth-bores, and carried a cast-iron spherical ball about 1 ounce, as smooth as a boy's marble. This fitted exactly. They used a large charge of about 6 drams of native powder; when I gave them Curtis and Harvey No. 6 grain it was reduced to 4 drams nominally, but they did not themselves approve of a reduction.

Their matchlocks were superior to those in the hands of the ordinary shikaris, which are generally of so common a description that accidents frequently occur; the back-sights were carefully protected by a tunnel, and for a standing shot they were admirable. These people were not restricted to such easy triumphs, but they took the animals at any speed, and whenever a shot was fired by one of these fatal brothers, the game was bagged.

I admired them for putting the bullet always in the right place. We never had to hunt up wounded animals. If I heard two shots in a drive, when the beaters or shikaris came up, I inquired, "Who fired?" If the reply was, "Gholâb Singh," I only asked whether it was "a stag or a female," as I knew that it was dead.

The iron bullet generally passed completely through the body of a sambur stag: always so, when Gholâb used English powder.

It may be readily imagined that such Nimrods would severely punish the game throughout an extensive area. I shot last winter, December 1888 and January 1889, through the same ground as that of three years previous; we only killed fifteen sambur where we had killed forty-three. Of these, six were stags. There could not be a more deplorable proof of the disappearance of game.

A native has a better chance than a European when squatting in the jungle, waiting patiently for his opportunity. His patience is inexhaustible. His limbs and joints are like india-rubber, and will bend to any required position. He is never stiff or uncomfortable, neither does he comprehend the meaning of the word "cramped." He will sit for an hour upon pointed stones, and double himself up into a space so small that it is incredible how he can pack himself away to avoid discovery.

All this is highly favourable to jungle shooting; there is nothing to equal invisibility. A native watching-place is a very simple affair. If a drive is to be arranged for sambur, it will include all other animals that may pass the hidden guns. Such a man as Gholâb Singh, or his brother, would have a thorough knowledge of the habits of the game, and he would select his position accordingly. He would then cut a sapling half through, the thickness of a man's wrist, about 2 feet above the root. This

stem would probably be 12 feet in length; he bends it down, and with a piece of twisted bark he ties the thin end to a neighbouring tree-stem, so that it lies horizontally secured. He now cuts a similar sapling from the opposite side, and bends that down on the top of the first pole. He secures them together. This forms a strong double rail, against which he plants a row of small green boughs, broken off the trees, and arranged to look as though they grew naturally in their new position. This makes an admirable screen, behind which he squats upon the ground, invisible. He is so low that he is beneath the ordinary line of view; as all wild animals, when disturbed and expecting danger, are looking out for man, the shikari is far below; when squatting, and stooping behind his leafy screen, he is hardly more than 20 inches high. A European could not compress himself into so small a compass. An animal will always regard a level from 3 to 6 feet above the surface, therefore it will generally overlook so low an object as 20 to 24 inches.

I have frequently asked these men whether they were in danger should a tiger or bear be driven towards them: they replied that there was only a remote probability of their being observed by the animals, who would pass by without seeing them.

Whenever arranging a hiding-place for myself, I used much stronger material, and bent down two horizontal poles about $3\frac{1}{2}$ feet above the surface. I then filled in the space beneath with thorns, against which I laid tufts of withered grass

interspersed with a few green branches. I sat upon a turn-stool behind this screen, and cannot remember that I was ever observed until the animal had passed me. I frequently had opportunities of watching the animals approach when the wind was fair, and they never espied the hidden danger until they gained the wind by passing my position.

This style of shooting does not sound like fair sport, but in many places it is the only method that can be adopted. If a man is young and active, he may distinguish himself as a back-gun behind the line of beaters: he will then have plenty of hard work, and will generally obtain better shooting than those in the front, for whom the beat is organised. In places of difficulty, where we were doubtful of success in driving the game forward, I always placed the two brothers in the rear of the beaters. The greater portion of the game was shot when breaking back.

Frequently, upon mountain sides so steep that it appeared impossible for any four-footed animal to ascend, the sambur stag would thread its way by some well-known game-path, and hide among the great fragments of rock which had fallen from the crest above. There were always men who mounted the extreme ridge, and rolled down stones to disturb the jungle by their crash. Whenever a stag was seen hiding among the sheltering rocks and bush, a tremendous yell from the men above gave warning to those who were below. The fun then commenced

for the back-guns. None but practised natives could scale the heights, and when at length the stag came thundering back down the steep hillside, and the shot was heard, it was certain death if Gholâb or Dholâb were within 100 yards. These men and the eldest brother Bhopal Singh were great allies of mine, and I liked them exceedingly; their only fault consisted in their unsparing energy, which induced them to kill everything.

Forsyth, in his most admirable work, *The Highlands of Central India*, gives a glowing account of stalking the sambur deer. The localities must have entirely changed since the days of his experience. I have been five times to India, and I have never yet seen a spot where stalking the sambur as a recognised sport could be adopted. In the first place, they are too scarce; and they are too much disturbed.

Although I was eight years in Ceylon, during which I was shooting or hunting in every portion of the island, I am certain that I never shot half a dozen sambur. We never drove the jungles with beaters, but simply strolled through the most promising country, either upon our ponies or on foot, and took our chance of any game that we might meet. I rarely met sambur in the low country; and, when living upon the mountains at Newera Ellia, 6200 feet above the sea-level, *shooting* sambur was out of the question. Although the interminable forests of that elevated district abounded with these animals, I have never seen one, unless

discovered by the hounds. The jungles are thick, and it is impossible to get through them without noise and considerable exertion. The animals of course are alarmed, and retreat before you are near enough even to hear their rush. I have often taken my rifle, and sallied out before sunrise, upon the wild patinas (open ground), where nature rested in profound solitude; but I have never seen a sambur on the open. I can safely declare that, during seven years' residence at Newera Ellia, I have never fired at any wild animal, except an elephant. The jungles formed an impenetrable sanctuary; and they remain in the same condition at the present moment.

In the spring of 1887 I revisited Ceylon after an absence exceeding thirty-three years. There were mighty changes in many portions of the country, but at Newera Ellia the word "progress" moves but slowly. The roads were certainly improved, as they were superior to any of our highways in England. The bridges were built of stone; in the old days they were dangerous traps of wood; but I was disappointed in the number of private residences, which had not increased to the extent that I should have expected during so long an interval as thirty-three years. I left about twenty-four houses, and found only thirty.

Newera Ellia is a peculiar position, the plain, which is 3 miles in length, being 6200 feet above the sea. This level surface is surrounded by mountains, among which is Pedrotallagalla, the highest point in Ceylon, 8300 feet. A stream runs

through the centre of the plain, and issues from a gap, whence it descends in a succession of falls and rapids to the lower country.

The gap has been dammed by a solid bhund of masonry, and, by raising the level between two opposing heights, a considerable portion of the marshy plain has been converted into a lake. This has much improved the general appearance of the locality, as in former years it bore the somewhat desolate aspect of a peat bog.

Mr. Le Mesurier, the district magistrate, has set a bright example by exerting his energy for the benefit of the public. At his own cost he established a fish-nursery, to which he applied his attention with such success that the lake now abounds with trout, all of which have been hatched from ova introduced by himself, and reared in his own tanks. This officer is an energetic sportsman, and he keeps a pack of hounds for the hunting of sambur deer (miscalled elk in Ceylon), and follows much upon my own footsteps of a bygone age.

It was a peculiar pleasure to revisit this settlement, which is the sanatorium of Ceylon, as I had worked so earnestly in its foundation during my early days. The church which we assisted in erecting was there, and the churchyard which we had laid out within the forest was now filled; one of the occupants being a much-loved brother, who had helped to plan the cemetery when we were young. All the graves were kept in beauti-

ful order, and the sadness of the spot was relieved by beds of European flowers, and gravel walks that gave the appearance of an English garden.

Some of the mountain slopes at Newera Ellia had parted with their original clothing of rank forest, and were covered from base to peak with tea plantations. Others were producing cinchona; but the latter tree, although prosperous at the commencement, had exhibited the risks attending all agricultural industries. The subsoil at Newera Ellia is rich in iron; this is fatal to the cinchona, but favourable to the tea.

The Government had wisely declined to sell Crown lands in the neighbourhood of Newera Ellia beyond the altitude of 5000 feet above the sea; I therefore was delighted to see many places that were absolutely unchanged, and when, from rising ground at our old estate, Mahagastotté, I looked upon the rounded masses of forest and hill-tops extending for 18 miles to the Horton Plains, my past life appeared like a vanished dream, and I could imagine that I had only parted from the scene a few weeks ago.

Throughout all this country we used to hunt, and although pathless, I knew every portion intimately. The return to my old home was saddening; most of the old companions were dead, others had grown old, and were hastening to decay. I looked at the wild ground, and walked for about 14 miles one

morning to revisit the old scenes. I felt tired upon my return, and depressed in spirit, as I looked back upon the days when I seldom walked, but always ran, and never knew the meaning of the word "fatigue." I suspected that I also must be growing old.

It is astonishing to regard the havoc that can be created by the axe. I remember the time when we looked over an expanse of interminable and pathless forest from the hill-tops above Newera Ellia. No person would have believed that it would entirely disappear, and give place to tea. A railway station at Nana-Oya is only 4 miles from the hotel, which brings the sanatorium within eight hours' journey of sweltering Colombo.

I re-read my own book, *Eight Years in Ceylon*, written in 1854, to refresh my memory of things and people connected with the country. It struck me that I had been rather unsparing in my criticisms upon certain governors of the island, but the sins of omission and commission upon their part were nothing to the act of the man (whoever he may have been) who had deprived the troops of their sanatorium, dismantled the barracks at Newera Ellia, and, although a railway now brings the place within only a few hours of Kandy and Colombo, had neutralised every advantage by withdrawing the entire military detachment.

Here was a magnificent anomaly; "that a

sanatorium had been established which every European who can afford the time and expense, visits for a certain period of the year. Common-sense would suggest that British troops should always be quartered in the most healthy position, and Newera Ellia was in former days accepted as the hill station for invalids. The only drawback in those days consisted in the distance and delay occasioned by bad roads, sometimes rendered impassable during the rainy season. Now that the railway was in being, the old difficulty had disappeared; but in the face of the absurdity the troops had been withdrawn!"

I often wonder how England manages to get on as she does; she hobbles along through modern history after her own fashion, supported by the British taxpayer, the easily cajoled and easily skinned John Bull. With our small and expensive army, which is insufficient for our needs, we treat our soldiers in a manner that would be considered a disgrace if they were domestic animals. No person in Ceylon would keep his dogs in Colombo, if he could provide for them in the splendid climate of the hills.

It is now forty years ago since I first introduced the brewing of beer into Newera Ellia. This succeeded admirably, so long as a good quality of malt was supplied from England; it was an interesting result of my early experiments to find an important brewery worked by a company, who make their own malt, and were about to grow

their own barley in the Ouva district, about 13 miles from the sanatorium.

The destruction of forests in the lower ranges which surround Newera Ellia should have greatly increased the number of sambur on the highest mountains, which remain untouched. Nothing can compare in the present day with our game list of olden times; the hunting of the pack is confided to a native, and although I saw some fine hounds, the whole style is differently arranged. We always turned out regularly three times a week, and I hunted the pack myself. Occasionally we gave the neighbourhood of Newera Ellia a rest, and took the hounds for a few weeks either to the Horton Plains, 18 or 20 miles distant, or to the Elephant Plains in the opposite direction.

The country offers many advantages, none of which have been as yet developed. The highlands of Ceylon form an irregular series of plateaux at varying levels. When Newera Ellia is reached, although 6200 feet above the sea, it is not a mountain top, neither is it, like those horrible places Simla and Darjeeling, a mere ridge, girded by frightful precipices, without a level spot the size of an ordinary dining-room, unless scarped artificially from the hillside, but you can drive for miles upon more or less level roads in various directions. There are many plains, some at the same altitude, others at a much higher level; for

example, the Horton Plains. The following description, extracted from *Eight Years in Ceylon*, will afford more detailed information than I could bestow from memory:—"The principal mountains in Ceylon are Pedrotallagalla, 8300 feet; Kirigallapotta, 7900; Totapella, 8000; and Adam's Peak, 7700; but although their altitude is so considerable, they do not give the idea of grandeur which such an altitude would convey. They do not rise abruptly from a level base, but they are merely the loftiest of a thousand peaks towering from the highlands of Ceylon.

"The greater portion of the highland district may therefore be compared to one vast mountain; hill piled upon hill, and peak rising over peak, ravines of immense depth forming innumerable conduits for the mountain torrents. Then at the elevation of Newera Ellia the heavings of the land appear to have rested, and gentle undulations, diversified by plains and forests, extend for some 30 miles.

"From these comparatively level tracts and swampy plains, the rivers of Ceylon derive their source, and the three loftiest peaks take their base; Pedrotallagalla rising from the Newera Ellia Plain, Totapella and Kirigallapotta from the Horton Plains.

"The whole of the highland district is thus composed of a succession of ledges of great extent at various elevations, commencing with the

highest, the Horton Plains, 7000 feet above the sea.

"Seven hundred feet below the Horton Plains, the Totapella Plains and forest continue at this elevation as far as Newera Ellia for about 20 miles, thus forming the second ledge.

"Six miles to the west of Newera Ellia, at a lower level of about 900 feet, the district of Dimboola commences, and extends at this elevation over a vast tract of forest-covered country, stretching still farther to the west, and containing a small proportion of plain.

"At about the same elevation, 9 miles north of Newera Ellia, we descend to the Elephant Plains, a beautiful tract of fine grass country, but of small extent. This tract and that of Dimboola form the third ledge.

"Nine miles to the east of Newera Ellia, at a lower elevation of 1500 feet, stretches the Ouva country, forming the fourth ledge.

"The features of this country are totally distinct from any other portion of Ceylon. A magnificent view extends as far as the horizon, of undulating, open grass land, diversified by the rich crops of paddy which are grown in each of the innumerable small valleys formed by the undulations of the ground. Not a tree is to be seen, except the low brushwood which is scantily distributed upon the surface.

"We emerge suddenly from the forest-covered mountains of Newera Ellia, and, from a lofty point

in the high road to Badulla, we look down upon the splendid panorama stretched like a waving sea beneath our feet. The road upon which we stand is scraped out of the mountain side. The forest has ceased, dying off gradually into isolated patches, and long ribbon-like strips on the side of the mountain, upon which rich grass is growing, in vivid contrast to the rank and coarse herbage of Newera Ellia, distant only 5 miles from this point."

This exact description of the country will enable any person to imagine the style of hunting the sambur with hounds, as he will at once perceive that the greater portion of the work must be done on foot. Although I generally started on horseback, the animal was seldom seen throughout the day.

The forest throughout the entire district was more or less the same in character. Fine timber shaded an undergrowth of a plant called nilho. This grew in straight sticks a little thicker than the fore-finger of a man, to the height of 10 or 12 feet. The density of the mass may be conceived, as it grew almost as thickly as a field of corn. There were no lateral branches, but merely leaves; fortunately it had no thorns, and was easily broken, otherwise it would have been impervious.

This plant blossomed only once in seven years; at such a time the jungles were a blaze of flowers humming with bees, which appeared as though by magic, to collect their crop of honey. When the blossom seeded, great numbers of jungle-fowl

invaded the forests; but whence they came, no one could satisfactorily decide. Rats also swarmed to devour the nilho seeds, and from the commencement of the blossom it was a most interesting example of one of nature's rules, that wherever there is a supply of food, some creatures, whether insects or animals, will be ready to consume it.

But when that nilho had seeded, it died; the result was disastrous to the hunter. The long sticks fell upon the ground in chaotic entanglement, and in some places it was impossible to break through. It was always sufficiently irksome to push a way through the yielding nilho when it was erect, but when fallen, it was a terrible trial to the shins.

I have already mentioned the fact that I never saw a sambur upon the open, unless driven by the hounds. The hunt was conducted as follows. We started at daybreak. I had a special costume for running. This woven dress consisted of tights, similar to ordinary elastic drawers, with a short jacket of the same material, that fitted like a jersey. These were dyed green. A pair of rather high ankle boots, which laced in the usual manner, the soles not more than a quarter of an inch thick, with about a dozen large nails in each, and the same around the heel. A rather broad leather belt, with a very large and strong buckle, and my hunting-knife, completed the outfit. A small helmet cap protected the head. A cup of hot coffee before the sun rose, fortified me for

any number of hours that we might be employed. I never ate anything, but according to my own feelings I could work more satisfactorily upon simple coffee, with my belt tightly drawn and buckled. I never by any chance took anything for lunch, and I made a point of never drinking until I returned home; this was sometimes, but rarely, after dark. This system was excellent training for the work required. Upon ordinary occasions I was either alone, excepting my huntsman (a discharged soldier, 15th Regiment, Benson), or I was accompanied by my brother, or some other friend. During the fine season, when Newera Ellia was full of visitors, we had large parties, including many ladies. On those occasions every one was mounted, and I invariably reserved certain localities where horses would be of service, and the sambur would most probably break across the open.

It was a delightful feeling in those days of activity, when starting in early morning I opened the kennel-door. A charming pack was created after several years of crossing special breeds to produce all that was required.

For hunting sambur in such a country as described, the pack must be mixed. We commenced by a mistake, in taking a small pack of foxhounds from England. They were fine young hounds; some from Lord FitzHardinge's pack, others from the Duke of Beaufort's.

I discovered immediately that a pack of thoroughbred foxhounds was a fiasco in a wild

extent of jungle, where it was impossible to ride. They ran riot upon high-flavoured musky vermin of every description—cats, and genets, and little red-deer; in fact, anything except the game required.

By degrees I produced a pack of about fourteen couple, composed of various breeds. Some were pure foxhound, others a cross between foxhound and pointer, blood-hound and pointer, foxhound and blood-hound, mastiff and blood-hound, mastiff and blood-hound crossed with kangaroo-hound from Australia, English greyhound and kangaroo-hound; in fact, every conceivable mixture, to produce three classes of dogs—(1) finders, (2) finders and seizers combined, (3) long-legged powerful hounds for coursing.

The mixture was necessary for these reasons. The habits of the sambur were nocturnal. During the night it enjoyed the open plains. Before dawn, after feeding throughout the night, it drank, and then returned to the depths of the forests. The stags generally ascended to considerable heights upon the mountains, and wherever there were bluff and overhanging rocks, there was sure to be an asylum much frequented.

It was a rule to start with the hounds in couples, to avoid trouble and delay, as young hounds would probably stray off upon some forbidden scent.

Upon arrival in a secluded plain, the course was always directed towards the stream, as the sambur would have drunk at the last moment before retiring

to the jungle. The scent would therefore be freshest near the bank.

The hounds would be thrown oft upon the plain; sometimes two or more pups would be retained in couples, and only released when there should be "a find."

It was an inspiriting sight to see the foxhounds, or those crossed with pointer or blood-hound, take the lead, and instinctively dash along the margin of the stream. Old Bluebeard was the hound in which the pack believed, and when he spoke after feathering along the bottom, with stern erect and nose to the ground, there was a general rush towards the spot by every dog, no matter what his breed; they were all believers. The couples were at once released, and away went the pups to the halloo of "Hark to Bluebeard!" The deep notes of the old hound were quickly heard far up the mountain side, chorused by the voices of the pack as they followed hard upon the scent.

In the meantime where was the noble stag? He was by this time standing somewhere high upon the hill, but happily at some distance from the crest. With a paunch full of green food, the gluttony of a night, and a gallon or so of water taken when he quitted the river's bank, he had been disposing himself for sleep, when his attention was aroused by the excited voices of the hounds. If any human eye could have regarded him, he would have been seen standing with uplifted nose and well-pricked ears, listening to what was music to us, but the death-

knell to a deer. When attentive to the distant voices, quite half a mile away, he little dreamt that long-legged mute hounds were far in advance upon the scent. Here we see the advantage of the cross with greyhound and foxhound, or blood-hound. Those dogs would follow by scent or sight, but would never open. Much faster than other hounds which composed the pack, they went ahead, and gained a position close to the stag before he knew that danger was nearer than the chorus to which he listened at a distance. Sometimes I feel sure that the long-legged dogs actually appeared in view of the awaiting stag before he had an idea of any enemy. This was absolutely necessary to ensure a quick solution of the hunt. If the stag were not pressed to his utmost at the outset, he would have plenty of leisure to breast the mountain steep, to reach the summit long before the pack. In that case he would cross the ridge, and descend the slope upon the other side. That would be a case indeed when the buckle of the waist-belt would be drawn as tight as possible, to prepare for a long day's work; as the sambur would never stop when once his nose was turned down hill, and he would run for probably 10 miles into the depths of some awful ravines, where he would possibly escape.

If, on the other hand, the mute long-legged hounds should interview him before the arrival of the pack, the effect would be magnificent. For the first burst the stag would make straight up the mountain side, but the full paunch of a night's feed

would quickly tell against his chances of success. The hounds, with empty bellies, running light, would quickly overhaul him, and the stag must turn. Then he would come crashing through the jungle, running obliquely down the hill, but the long-legged ones would be at his heels, and force him straight down the steep incline, where he would have the speed.

In the meantime, listening to the notes of well-known hounds, I could tell with tolerable accuracy the position of affairs. Hearing that the pack did not positively crest the mountain ridge, I knew that the stag had not been able to attain it; he therefore would perforce be coming down. Judging by the appearance of the country the point at which he would be compelled to break, I would run ahead with the two long-legged seizers, which always remained with me, to be ready to slip the moment that he should appear upon the open. Arrived at the spot, I should now hear the pack in full cry coming down the hill. Presently the crashing sound of breaking nilho in the forest would ensure the delightful advent of the stag. A few more moments, and the splendid beast would appear through the margin of the forest. There he would wait for a few seconds to gaze upon the expanse of solitude, to assure himself of safety before he ventured upon a dash across the open. Away he goes! straight down the gentle slope, across the plain. At that moment I slip the straining greyhounds, and the course begins. They fly!

The stag knows nothing of these new enemies, and he is not going at his maximum speed; they are. The greyhounds are closing on him as he nears the stream that runs through the centre of the plain—that same stream in which he took his last drink this morning.

Suddenly he sees the dogs within 100 paces of him, and the true race begins. They are too quick; they are upon either flank. Presently one turns a somersault, as a vigorous kick sends the dog flying backwards, but the next has him by one ear. The discomfited hound recovers, and rushes to the front; the other ear is pinned.

Now the strength of a sambur stag is seen. He gallops forward with the two dogs gallantly hanging to his ears. The ground is rough, and covered with large stumps of a coarse grass; against these obstacles the bodies of the dogs are swung with terrific force as the stag ploughs onwards, through the soft earth and swamp; but the good dogs never relax their hold. At length the stag trots—now slowly—then he walks. The dogs now regain their feet, and hold like a blacksmith's vice.

In the meantime the view halloo had been given the instant that the greyhounds had been slipped. The well-known sound, repeated twice or thrice, had been answered by the pack, and every hound came thundering down straight for the cry, disdaining all the attractive charms of scent. The long-legged dogs that had been running mute would be within view, and tearing to the assistance of the nearly

exhausted greyhounds. The knife would not be far away, and upon coming up, a thrust behind the shoulder would finish the career of the noble stag. Then the excitement of the pack would break all bounds; a general rush upon the helpless body was permitted for about a minute to encourage the hounds; they were then whipped off, and they sat in a circle in general expectation. The stag was grallocked, the distended paunch and viscera dragged upon one side, together with the heart and lungs. The liver was cut into several pieces, and given to the young hounds, who were called from the ranks by name to receive the dainty morsels. When all was ready, a halloo was given for a "worry," and the entire pack flew like wolves upon the spoil.

It would be impossible for me at this great distance of time to remember every detail of a particular hunt, but as I possess my old diary, I will extract verbatim the description of one or two runs which were noted down on the following day with all the freshness of the recent action :—

"1852. *July* 27.—Stag sambur (elk) found at 7.30 A.M. upon the swampy pastures about 2 miles up Pedro. He first made straight running down the mountain, with the apparent intention of breaking upon the plain, but being headed by some noisy people at the back of the old Rest House, he immediately turned and made straight up the mountain. From that moment all was mute. Three times did I ascend Pedro in the hope of hearing the pack at bay in some of the

numerous ravines upon the mountain side, but it was of no avail; not a sound could be heard. We then went up the Newera Ellia pass; nothing could be heard in that direction. The whole morning passed away in fruitless search. It was 2 P.M., and the wearied visitors to the hunt had long since returned to their respective homes in despair. The day was hot, and we dropped into Machel's house and had a draught of beer previous to climbing the steep mountain at the back of the barracks, in the hope of hearing something of the lost pack upon the hill-top. Making a circuit on reaching the summit, we descended by the Cutcherry, and not having heard even a chirp, we determined to go towards 'Rest and be thankful,' where I had sent Machel to look out. Upon our arrival on the top of the hill on the Wallapane road, where the path branches off to 'Rest and be thankful,' we saw Machel, who was sitting on the patina, having returned from his post without success; but a proof of the direction which the pack had taken, now appeared in Lizzie (a foxhound bitch), who had just joined him from the Wallapane road.

"There was no longer a doubt; the elk had gone towards the Matturatta Plains, and without a moment's delay we galloped thither (having now obtained our horses). After a sharp ride of a mile, we met some village people, who reported that two dogs had passed them at full speed along the path in the direction of the Matturatta

Plain. Hurrah for him at last! and away we went full tilt. When within a mile of the plain, sure enough there was a stag's track in the muddy path as fresh as a daisy; the toes widely spread, proving the speed, together with innumerable tracks of dogs all taking the same direction.

"Yelling continuous shouts of encouragement in the hopes of cheering the hounds as we galloped on, we at length reached the plains. There to our joy we saw Bran and Lucifer (two greyhounds), who, having heard our shouts, were coming to meet us. These dogs had actually been hunting with the pack throughout the day, and there was now no doubt that the stag was not far distant. Lena had kept with us, therefore we had a fresh seizer. Leaving the road, and riding into the plain, we stopped and listened. The panting and snorting of the horses, which had come 3 miles at full speed, at first hushed all other sounds, but presently we could distinguish the distant and faint voices of the pack at bay upon our right. The sound was unmistakable, although the dogs were evidently so weary that they only barked at intervals. However faint, the bay was positive, and the sound acted upon our spirits like oil on a dying flame. Away we went across the patina, utterly regardless of the deep holes and bogs. Bran and Lucifer, shooting ahead, piloted us at a tremendous pace towards the wished-for spot. Suddenly away went my horse Jack, right upon his head in

a soft bog, and at the same instant Momus was likewise inverted by the same cause, both riders sprawling upon the muddy patina. Gathering up the pieces, and helping the horses to *terra firma*, we were quickly in the saddles, and on gaining some rising ground we saw the hounds a quarter of a mile distant on the bank of the river; some were standing, some sitting, and others lying down, and occasionally barking at a splendid stag who stood facing them close to the bank, shoulder-deep in the running stream.

"We were soon up. At the well-known halloo the tired dogs sprang from the ground, and burst into a tremendous bay, when they saw the welcome aid now hurrying to the front. The stag, refreshed by his cool bath, without waiting for an attack, sprang nimbly up the bank, charged through the pack, striking down every opposing hound, and at full speed started away up the gently sloping patina towards the jungle.

"The dogs were not to be beaten. Lena was fresh, and the eager bitch pressed him in such good form that she was within 6 paces of his haunches when he disappeared within the jungle. Bran and Lucifer were closely waiting on her, and the following pack some 50 paces in the rear.

"The forest was open, and the thick fringe of ferns and underwood was soon cut into a lane as the dogs crashed through in hot pursuit. . . . About five minutes passed; during this time the

cry of the hounds became fainter and fainter, until at length the sound died away entirely in the far distance. . . . It was a painful silence.

"The water in the river, still muddy from the recent bay, and the crushed underwood of the jungle, were the only visible signs that the stag and hounds had so recently been near us. The game had gone off so suddenly and rapidly that we could hardly believe our senses.

"It was impossible to say what direction the stag would take; he might go to 'Rest and be thankful,' or to the Barrack Plain; or he might go right off towards Pérewelli (8 miles distant in the low country); one place was as likely as another. Certain it was, that this stag was a devil to run, and we now seemed to be as far away from the end of the hunt as ever. My only hope lay in Lena; she was fresh, and was so near him when they had entered the jungle, that I thought she would hold her position in such an open forest; although she did not follow by scent, she would rarely lose her game with so good a start.

"Disappointment possessed me, and my patience had nearly oozed away with sundry anathemas upon the sinewy legged stag, who seemed to laugh at the speediest dogs, when suddenly I heard a distant sound. Was it a dog?—Yes;—No;—but hark!—then it most certainly sounded!—now again! There was no mistake; nearer and nearer the cry rapidly approached, swelling

into such a chorus that there was no doubt the whole pack was close upon him. On he came; the crash of the yielding underwood ushered the stag's approach, and he bounded forth upon the plain within a few yards of the spot where he had so recently entered the forest. Lena was leading beautifully, and as the grand stag rushed through the high ferns, the bitch made a gallant spring. For the instant he was down; but shaking the bitch off, he was again free; he flew down the sloping patina towards the river with the three greyhounds laying out in such style that it was even betting if he could reach the bank. He neared the stream; they were at his haunches. As he took his spring from the steep bank, the greyhounds pinned him, and they splashed together into the deep water in a confused heap, the dogs losing their hold through the severity of the shock.

"Once more the stag was free. He now boldly turned, and faced the dogs in water so deep that he was forced to swim, and was of course powerless.

"Bran had him in a moment. Lucifer and Lena pinned him likewise; the whole pack closed up, and he was overwhelmed with dogs.

"I thought the game was ended, when to my surprise he suddenly dived, and regularly drowned every dog from its hold. Once again the gallant stag was free, and wisely turning his back upon his foes, he swam rapidly down the river with the pack swimming after him in full cry.

"At length he gained a footing in the bottom, where the river suddenly grew shallow; disdaining further flight, he turned sharp round, and with an angry bark he dashed straight at his pursuers, striking them under water right and left. Now Lena came splendidly to the front, and sprang towards him from a shallow sandbank where she could obtain a footing, but the stag, foreseeing her intention, met her in her spring, and struck her down, following her up most viciously with his antlers. In another instant the bitch would have been impaled, but at this critical moment Valiant, who had gained a good position, cleverly sprang forward and seized him by the ear. Nothing could shake him from his hold. 'Hold him, good lad,' I shouted, when Ploughboy, who was close alongside, seized the other ear.

"The stag now rushed down the river with the two dogs hanging like earrings from his head. Rearing upon his hind legs, he vainly endeavoured to shake them from their determined hold. Rushing again into the deep water, once more he dived; but all in vain; as he reappeared upon the surface, the staunch couple were hanging like leeches at their places, although half-drowned, and regardless of many severe blows they had received from his fore-feet.

"I now jumped into the river, with a loud cheer to the pack, and the knife bared. In another moment the greyhounds sprang upon the stag. The spray flew from the blows of his feet, as he lashed out in all

directions in desperate fury; but the maddened hounds were upon him, and the knife put an end to a hunt which had lasted from 7.30 A.M. until the termination at 4 P.M. Eight hours and a half; during which it would be difficult to guess the number of miles that were covered by both stag and hounds. Ploughboy was lamed for a week from a severe kick, but none of the other dogs were seriously injured."

Although as a rule a stag is more dangerous than a hind, I have seen fatal wounds produced by the blow of the fore-foot, with which the sambur hind is very active. It may readily be imagined that in deep water, where the deer is obliged to swim, it is powerless to act on the offensive, but when so large and powerful an animal stands only belly-deep in the midst of a roaring torrent, it becomes impossible for any dog to approach, as it would be instantly swept away by the stream. A hind becomes dangerous to hounds in such a position, as she is apt to make a sudden bound, and strike a dog with both the fore-feet simultaneously. I once knew a fatal accident, when a dog named Cato was killed in this manner, and the sharp pointed hoof penetrated the body like a spear, and dragged out the intestines in the act of withdrawal. Success in hunting sambur deer with hounds must depend upon an intimate knowledge of the character and habits of the animal, a mutual confidence between master and hounds, and a most perfect experience of the country. If the hounds feel sure that their master will stick to

them, and be certain to appear sooner or later, they will keep the deer at bay, and never give up their game till nightfall; but if they are not well supported, the best dogs would probably get tired of a prolonged hunt, and return to kennel after having uselessly held their stag at bay in the absence of human assistance.

My hounds seldom lost a sambur; but if they were unlucky, they never returned home until long after dark, showing that they had only given up the game with failing daylight.

There was one memorable stag that beat us upon several occasions, and I shall extract the account from my old diary exactly as it was written upon the day following the last hunt:—

"1853. *March* 11.—Stag found at the foot of the hills in the Elk Plains.

"On several occasions an elk (sambur) had been found in this spot and invariably lost, as his habit was to make off to some unknown line of country, which had always ended in his escape, and in keeping the best dogs out till nightfall. They had then returned to kennel crestfallen and tired out; evidently having been beaten off.

"On this day, sure enough, the tracks of a stag were fresh at the usual place, and in a few minutes after our entrance of the jungle, the entire pack opened with beautiful music, all well together.

"We immediately ran out of the jungle, and on the open patina only a few notes of the tailing hounds were audible; these were at a great distance,

the stag, as usual, having gone off at railway pace.

"The important question now was, 'Where was he gone?'

"This was the old story over again, and the hunt seemed likely to have its customary termination. We had hitherto imagined that the stag had escaped by going off to the left at the base of the hills, and by ultimately rounding the extremity of the range, and by this means getting into a jungle country of enormous extent.

"Upon this supposition Jem started off towards the second Elk Plains, in the expectation of hearing them as they rounded the extremity of the hills.

"On the other hand, I was of opinion that they had gone over the hills, as the voices of the tailing hounds (which I distinctly heard) were very high up. We had run out of the jungle so quickly that I felt convinced we must have heard the leading dogs, and the entire pack, had they not already topped the range.

"Accordingly I started off, and entering the jungle, I made straight for the hollow between the mountains in which I had last heard the dogs, with the determination of following up their tracks if I should be fortunate enough to find them.

"After toiling for some time through the thick jungle I arrived at the hollow, and I shortly discovered a capital path made by elephants of all dates, and which, from its beaten appearance and total absence from underwood, was evidently the direct

track over the mountain which had been used for many years. It immediately struck me that it was by this easy route that the stag had always escaped over, and not round the hills, which I had hitherto supposed. Fully convinced of this, I hurried up the path as fast as I was able, and when about half-way up the hill, sure enough there were the deer's fresh tracks in the path, together with those of the whole pack likewise, taking the same direction up the hill.

"The hillside was about a mile in length, and a regular breather, but the excitement kept up a sort of shuffling run, until at last the summit was gained.

"From the top of this ridge is a very magnificent view over a jungle country of about 30 miles, bounded by lofty mountains, among which Adam's Peak towers majestically in the distance. A few small patinas (grass lands) are dotted about in the vast expanse of forest, and countless dark ravines furrow the mountain sides. The ridge upon which I stood formed the bold outline to this side of the panorama. On the right hand, far below, lay several coffee plantations, *i.e.* Palliser's and Hunter's, etc.

"A steep but regular inclination led from the point upon which I stood for about 5 miles downwards, to the level of the large river which flowed through the coffee estates, and a dark hollow in the face of the mountain marked the source and rapid increase of the Diggamy Oya, which meets the larger river below at right angles.

"To this dark line in the mountain side my eyes

instinctively wandered as the possible line of the elk's run, as I knew he would soon take to water after his quick burst up the hill.

"The sky was spotless, and not a breath of air stirred the tree-tops, upon which I looked down as upon a vast carpet of undulations. It was a lovely morning for listening, and I strained my ears for the slightest sound. I fancied that I heard an indistinct noise from far beneath like the hum of bees; this seemed to proceed from the dark hollow which marked the river's course. . . . It was not fancy. Once or twice I heard a deep voice louder than the rest. . . . To crown all certainty I heard most distinctly the sudden and ringing bark of an elk. They were at bay! but at least 3 miles from where I stood.

"In this spot, on the narrow ridge of the mountain top, the winter wind had prevented all trees from growing. The vegetation consisted of nothing but stunted bushes and dwarf nilho, gradually increasing in height as it obtained a more sheltered situation in its descent, until it gave place to lofty forest. From this clear and elevated post I marked out the line of country that I ought to take, and following the elk's track as my surest guide, I started off at a great pace down the mountain side.

"Tearing through the bushes and trees at this rate, I lost the track. Striking my line of country according to my own judgment, I ploughed along for a couple of miles, sometimes losing all sound of the bay, at other times hearing it indistinctly, but

always as far off, or apparently farther off than ever. The real fact was that the elk was continually breaking his bay, and running farther down the mountain towards Dimboola; he was only standing to bay within the river at short intervals to rest.

"For about 4 miles I had burst my way through the jungle, when, upon issuing from a hollow close to the river, I heard the bay within a quarter of a mile, and the jungle in this part being more open, I put on extra steam and was soon up. Ye gods, what a pair of antlers! what a splendid stag! There he stood in the middle of the river, knee-deep, with the dogs around him, playing old Harry with the leaders of the pack whenever they showed signs of making an attack.

"It was a splendid sight, and it was delightful to see the joy of the dogs as they welcomed me upon arrival. Lucifer, Bran, and Hecate all left the bay, and came up to me wagging their tails, and then once more returned to their work, to fight. Bertram was too absorbed in the excitement of the battle to think of anything but the game before him. I never saw a dog more regardless of punishment. He was struck down every minute, but he nevertheless returned to the charge with redoubled fury, and always retained his place as the first to lead in when any chance opened for attack.

"All this courage was useless; the stag was so quick in repelling, that the dogs, who were almost swimming, had no chance. Accordingly I drew my

knife, and, giving them a cheer, I went into the rapid stream.

"Immediately the stag broke his bay, and, rushing through the jungle, he was closely followed by the pack, until he again came to bay about a quarter of a mile lower down the river. I was soon up, and I found he had gained an impregnable position in a broad portion of the river, where the water was about 3 feet deep; this was just above a frightful waterfall about 100 feet in depth. On one side of the river the banks were precipitous, and about 12 feet high. Beneath this steep place of refuge the stag was standing, and for about ten minutes he amused himself by striking the dogs beneath the water in every direction, whenever they ventured to approach by swimming.

"I saw there was no chance for the unfortunate dogs; I therefore determined to try my fortune with the knife.

"From the high bank above the deer I noticed an overhanging branch which I thought would be sufficiently elastic to bear my weight. I accordingly grasped this with my left hand, and with my knife in my right I made a jump downward, intending to strike the stag between the shoulders, and then to regain my position by means of the elastic bough. I made the attempt; the bough broke, in an instant I was on the deer's back, and in another moment fell sprawling in the water.

"The stag sprang away as though stung by a hornet, but the knife had entered to the

hilt, and I had struck him just between the shoulders.

"The dogs, having seen me attack, rushed at the stag as he passed by, and at the same moment Bertram was seen hanging on his ear. Lucifer had him a second later, and the stag, shunning the brink of the waterfall, dashed through some thick bushes to the left with the dogs holding him, and in a moment they disappeared.

"I heard a dull heavy sound like the fall of some solid body; upon approaching the spot, I found the greater portion of the dogs. They were on the brink of a precipice about 30 feet deep, down which the stag, with Bertram, Lucifer, and Ploughboy, had fallen. Fortunately some dense tufts of bushes grew from the sides of the almost perpendicular cliff; these had broken their fall, otherwise they would have been killed. As it happened, they were not only unhurt, but I heard them at bay beneath.

"By making a circuit of about 100 yards, I discovered a place by which I could descend. The dogs had preceded me, and I heard a tremendous bay on a ledge of rock which formed a narrow terrace or shelf; there was a chasm below, and a wall-like cliff above, covered with bush; down this the stag and dogs had fallen, being saved from certain destruction by being caught upon the ledge.

"Having descended and gained this shelf, I made my way towards the spot where the stag was again at bay. Upon my approach he immediately saw

me; determined to gain the forest, he charged straight past me, or at me, I would not say which. I had expected this, as from his position he could not retreat without leaping into the chasm and certain death below. I had my knife ready, and I met him with the point just beneath the eye, and jumping quickly on one side I gave him a quick thrust under his right shoulder. The next instant he was covered with dogs, and the wound proving almost immediately fatal, the hunt was over. His horns were 30 inches long, and were the most graceful pair that I had ever killed.

"I cut off his head, and with it commenced a toilsome walk home, having killed the elk, which I had every reason to believe had so often beaten off the dogs and baulked me."

On that occasion I was quite alone, my native huntsman having lost his way in the jungle; I thus had to carry a head weighing about 40 lbs. for at least 4 miles up the steep mountain, and then 2 miles farther to my own home. I had cut open the stag, and allowed the hounds to take their fill of this gallant antagonist, who had worsted them upon former occasions, and would have been victorious again had I not arrived to their assistance.

From the few hunts I have described, it will have been apparent that the hounds are exposed to the roughest work, and that a valuable dog must combine great valour with discretion. It is the same with men; courage is always necessary, but it must be allied with prudence. Some persons assume that

courage is the commonest qualification, and is to be found among all men, just as ten fingers (with the thumbs) are supposed to be our due. I quite agree that after a good dinner in England, with plenty of wine inside, a bright fire burning in the grate, and no enemy in existence, men feel uncommonly courageous. It is natural that they should be so. But would all men feel the same with empty stomachs, no wine, no fire, but awakened suddenly from their sleep at three o'clock in the morning by the bugle sound of the alarm, the enemy being close at hand?

There are impetuous men and impetuous dogs—neither live long lives if exposed to danger. The hound for dangerous game should be like his master, a good fencer, and not run upon the points of a stag's antlers.

I have mentioned the name of Bertram among others. He was a grand young hound, by Smut (Manilla blood-hound cross with Cape mastiff) out of Lena (kangaroo-hound), born 7th February 1852. He was killed 18th March 1853. This splendid young dog was hardly fourteen months old. His height at the shoulders was 28¼ inches, and he was exceedingly heavy; the coat was yellow and smooth, as he showed more mastiff, having the regular mastiff head and black muzzle. I have only seen one dog who was his equal in reckless courage; that dog was also killed, as all dogs will be very speedily, unless they combine a large share of common-sense with valour.

Bertram's death must close my description of

sambur deer. This is also extracted verbatim from my original diary :—

"1853. *March* 18.—Stag found on the Matturatta Plains at 7 A.M. The dogs took the scent off the patina, and ran the elk down to 'Rest and be thankful' bottom. Turning sharp up the mountains to the left, they went to the devil. After looking for the lost dogs in many directions without success, I returned to the Matturatta Plains. Crossing the river, I entered the beautiful open jungle on the opposite side, and strolled on in the hope of hearing something of them ; Bertram, Bran, and Lucifer were with me.

"It was about 1 P.M., and we had gone several miles, when I thought I heard the deep voice of a dog at some great distance. We stopped and listened. For some time we could hear nothing, and thought it must have been only fancy; perhaps the wind, grinding one bough against another, which is so frequently deceptive.

"Again we heard it, and there could be no doubt that it was a dog; I was almost certain that I distinguished another voice; they were at a great distance, far away upon our right.

"After running for about half a mile, I heard them distinctly, but I could not make out the exact direction, as the elk was still on foot, and the position of the bay was continually changing, always increasing the distance.

"At length I came to a sudden standstill, as an abrupt precipice of about 500 feet fell sheer down

before me, forming a terminus to the wooded country of this portion of Ceylon, and affording a view of some 50 miles' distance of undulating plains, several thousand feet below.

"The precipice formed a horseshoe, like an amphitheatre of 2 or 3 miles in width; at the base was an undulating patina divided by strips of jungle, which ran like ribbons from the main forest on the mountain top, and gradually terminated in stupendous ravines; these led down from the base of the amphitheatre, and yawned in wide gaps above the lower country.

"In one of these narrow strips of jungle, at the foot of the precipice far away upon the right, I heard the whole pack at bay, but not being able to descend, I was obliged to run along the top of the cliff for about a mile before I could discover a way below. This I at length did, and the greyhounds immediately dashed off across the patina to join the bay. In a couple of minutes I arrived, and found the stag standing at bay in a deep gully of a small wooded ravine.

"A shallow stream flowed through the gully, and being a torrent in the rainy season, it had bored a deep gap in the high bank, which formed a sudden angle in its course.

"In this gap, with his hind-quarters half concealed by this little fort, the stag now stood secure from attack, as no dog could possibly get either on his side or behind him; there was no advance except direct at his face. He was a determined fighter;

making sudden sorties from his position, he continually struck down the leading hounds, and then quickly sprang back again to his stronghold.

"For a few seconds I silently watched the fight. I saw that the dogs had no chance, and, hoping to make the stag break his bay and change to a more favourable position, I hallooed the dogs on. When Bertram heard my voice it mattered little whether it was elk or boar, and the young dog rushed like a lion straight at the stag's head. The stag met him in his charge, and pinned the brave dog with his antlers against the perpendicular bank. Nevertheless the staunch hound would not loose his hold. Without a second's delay Bran and Lucifer rushed to the rescue, and the stag tore through the jungle with the three dogs hanging upon his ears and throat.

"Making a short cut through the patina, I came up with them within 100 yards of the first position. Bran and Lucifer had nailed him fast, and slipping the knife behind his shoulder, I killed him immediately.

"Poor Bertram! I feared that was a fatal thrust when I saw him pinned against the bank, and now I felt sure that he was dead, as he was absent from his place. I immediately tracked the stag back, and within 30 yards I found the dog lying in the last gasp, with a horn wound in the centre of the chest, completely through his lungs. He had evidently kept his hold until he dropped in the pangs of death. I poured water in hopeless sorrow over

his face, striving to relieve him as he convulsively gasped for breath.

"At length his limbs stretched and stiffened. My good dog was gone."

No one knows the loss of a dog of this kind unless he is constantly engaged in these wild sports. If Bertram had lived, he would have been invaluable, but it is a physical impossibility that any dog so reckless of danger can long survive. Killbuck, who was killed by a spotted buck at the Park, was just such another dog as Bertram, and he won undying renown by his feats of seizing during an experience of two years, until he met an untimely fate by impaling himself upon the deer's antlers, at the same time that he pulled his stag down single-handed, and died in victory.

These extracts from my original diary afford a vivid picture of the sport of sambur deer hunting, as it was conducted in Ceylon. I never permitted a rifle to be carried by any person who accompanied the pack, as shooting a hunted stag would have been regarded in the same light as shooting a fox in England.

I have frequently remarked with surprise that residents in India do not more generally make use of dogs for various types of hunting, especially as the climate during winter throughout the Central and Northern Provinces would be favourable to the sport. There are many places which I know, that would be far easier to hunt than the boundless jungles of Ceylon, and the sambur stag would then

exhibit his real character, instead of dying like a sheep, killed by a rifle bullet from an ambuscade.

Taking this animal as a representative of the species, although the antlers have few points, the sambur stag must be accepted as one of the finest specimens of the genus Cervus in the world.

CHAPTER XXVI

THE SPOTTED DEER (*C. AXIS*): HOG-DEER (*C. PORCINUS*)

WITHOUT any exception, this is the most beautiful and graceful of the deer tribe, although, like the sambur, it has only six tines upon the antlers. These are very long, slender, gracefully curved, and exceedingly sharp at the points.

The stag is a little larger than a fallow buck. The skin is a rich dark brown, glossy and short; this is completely covered with snow-white spots. The belly and the inside of the thighs are white.

In India this species is generally known by the name cheetul, but the habits of the deer are different from those of Ceylon. In the latter colony they are found upon plains in the neighbourhood of forests, until about an hour after sunrise; they again reappear upon the open at about 4.30 P.M. In the northern district, about Jaffna and Illepecadewé, there were an immense number when I knew the country many years ago. They were so little disturbed that I have seen them upon the open, and beneath shady trees and bushes throughout the day, in herds of upwards of a hundred each.

In India the cheetul is generally found in thick jungles upon the banks of rivers, where the country is much broken, and intersected by nullahs and water-courses.

Stalking the spotted deer in Ceylon was always an enjoyment, as the animal was, like most other deer, always on the alert, and the sport required both skill and patience, combined with accurate shooting.

In India I have never seen them in any numbers approaching to my early experience in Ceylon. I remember at Illepecadewé we had nine bucks hanging up in camp as the produce of one day's sport. Fortunately we had a great number of coolies to consume the flesh, but even then a portion decayed before they had time to prepare it thoroughly.

Whenever there is an excess of supply in a tropical country, the flesh should be cut into long thongs about 1 inch thick. A framework of green rods should be made about 4 feet high, beneath which a smoking fire should be well sustained. The strips of flesh should be laid upon the frame, and the smoke will prevent the flies from laying their eggs; which they otherwise will certainly do, before the sun has power to sufficiently dry the meat.

The smoke improves the flavour, and, when the flesh has been thus exposed for ten or twelve hours, it may be hung upon bushes in the sun, on the following day, until perfectly dry. A stock of dried

meat should always be preserved in wild countries, as there is frequently a feast to be followed by a fast. Although the appearance of flesh thus roughly treated is not exactly encouraging to a delicate appetite, it may be rendered excellent by beating it between two stones until well pulverised, and then transforming it into a curry, with the addition of a couple of hard-boiled eggs or vegetables. The venison of the spotted deer is seldom or never fat, although the animal is exceedingly round and fleshy. I have never found that good pasturage has improved the quality of the meat, which is rather wanting in flavour, and not to be compared with that of the black-buck or the hog-deer.

The horns exhibit the effect of pasturage, as those of India are much superior in average length to the antlers of Ceylon. In the latter country the effect of a poor and inferior soil is marked among all wild animals, as there is an absence of lime and phosphates, which deprives the elephants of ivory, and dwarfs the horns of buffaloes and deer. I have observed in India a superlative shyness in the cheetul, which is the result of the unremitting pursuit of the native shikari. This fellow is specially adapted by nature for destroying the spotted deer. The habits of the animal induce it to inhabit the thick jungles upon the banks of streams. These are fringes seldom more than 150 yards in width. The shikari accordingly squats upon the ground, concealed as already described by a few bushes, while he sends a couple of boys up wind to

enter the jungle, and then come down the wind upon his position. The cheetul, having scented danger, begin to move. They do not wildly dash forward, but cleverly retreat, stopping continually to listen; they turn up this nullah for a while; then cross over the dividing ridge; now they descend into the neighbouring nullah, and steal away down that. The shikari knows their probable path, and presently a shot from his matchlock kills a fine buck within 8 yards of the muzzle, where the herd has been listening for the danger from the other side, unconscious of the living trap in front.

It is curious to observe the difference in the sporting arrangements of various countries. I never can remember any instance of driving jungles with beaters in Ceylon; this was quite unheard of, excepting upon rare occasions for elephants, when a herd of these animals had taken up a position in such thick jungle that it was impossible to approach them. There can be no doubt that game is far more abundant in Ceylon, therefore the chances are in favour of seeing the animals upon the open. The population of the island is exceedingly small; large tracts of country are more or less unoccupied, and are undisturbed; this is naturally an advantage to the shooter. I have often looked back to bygone days, and regretted that we did not drive jungle, as I am of opinion that we should have seen many more bears and leopards, which are seldom met with when simply walking

through the forest glades, and the open spaces of the jungles.

I believe that the spotted deer have decreased in Ceylon, although there is a special close time, and stringent game-laws are enforced by the authorities. British action is generally "too late"; had these laws been made forty years ago, Ceylon would have been now a sportsman's paradise. Even at the present time, from the accounts which residents have given me, it far exceeds most countries in the exhibition of game; but it is a *young* man's shooting-ground; it is all hard work, and the luxury of Indian travelling and shikar is quite unknown. In India you may shoot when you are the age of Methuselah; the character of every sport is luxurious; you also have during the winter season the charm not only of climate, but the peaceful repose in the total absence of insects. Ceylon is the insect's paradise, and, if the sportsman resides in the same heaven for only a short period, he will enjoy a change.

I tried every kind of sport during a residence of eight years in Ceylon, among others that of coursing the axis (spotted deer) with greyhounds. My dogs were carried in a palanquin for 100 miles from Newera Ellia to the Park country. This was a beautiful portion of the island, where most kinds of game were plentiful. The name given explains the appearance of the locality: it was like a park, diversified with rocky hills of great height, jungles, rivers, and open plains.

The climate was exceedingly hot, as it is throughout the low country of Ceylon; it was therefore impossible to hunt with dogs, except in the earliest hours of sunrise.

I then rode out with about a dozen of my men, and a couple of greyhounds in slips. There was plenty of game, therefore we were never long without seeing deer. Sometimes we espied at a long distance a herd of axis. We then did our best to stalk them, leading the two greyhounds in the slips.

This was a very delightful sport, as the work was on horseback instead of toiling throughout the day on foot, as in Newera Ellia, when hunting sambur deer.

When a herd of cheetul were approached within 150 yards, I slipped the dogs. It was a beautiful sight to see the highly trained greyhounds select their deer. Killbuck despised a doe, and invariably picked out a buck, which he would quickly separate from the herd, and course single-handed across the open, until the opportunity offered, when by a well-prepared spring he fixed upon the ear. Being well mounted, I was always in view; and riding to the spot where he was holding the buck, I dismounted and gave it the usual thrust behind the shoulder.

This was my best dog, but he met his death upon an occasion when we happened to come across a very grand buck that was a born fighter.

As usual, the dog had the speed of the deer upon favourable ground: I was going my best to

keep them in good view. I saw Killbuck reach the flank, but before he had time to make a spring, the stag threw his head upon one side, and backward, so as to strike the dog with the extreme points of his sharp antlers. A short time after, the stag came to bay upon firm open ground, and fought the dog face to face. I saw Killbuck rush straight at the deer's face, and instead of receiving the attack passively, the deer quickly lowered his head, and not only met but charged the dog, rolling him over, and following him up as he drove his sharp tines deep into his body. The instant I arrived, the deer would have charged the horse, but Killbuck, who had recovered his feet, lost not a moment, and seizing the ear, the stag was in his hold. In a moment I jumped off, and drove the knife into its heart, killing it upon the spot.

The dog was dreadfully exhausted, and lay panting upon the ground. There were two or three small holes in his chest, which did not bleed. My people came up, and finding water in a stream, we fetched some in my helmet to bathe him. This seemed to revive him, and he was placed in couples with the bitch, who had come to the call, having been also wounded by her stag. In a few moments the dog fell to the ground, gave a few gasps, and died.

An examination showed that the horns had passed in two places through the lungs ; but in spite of the mortal wounds, he had seized and held the stag.

My experience in hunting the axis proved that

the extreme quickness, and dexterity in using the antlers, made it a more formidable antagonist to the greyhound than the more powerful but less active sambur. The real sport lay in coursing with a brace of greyhounds, but the difficulty lay in discovering a single stag. The deer were in herds, therefore when the hounds were slipped, they took different deer, instead of selecting and following only one. A single greyhound would be sure to receive a wound if he were game enough to go straight for the deer's head.

The hog-deer (*C. porcinus*) is the third species in Asiatic deer which has only six tines to the pair of antlers. This is a remarkable little animal about the size or a little larger than a good roe-deer. The skin is a deep rich brown, and the horns resemble those of a diminutive sambur. The habits of this deer are totally opposed to all others. It is never in herds, although a locality may abound with them, but it is generally found in pairs, or singly. The female of this species has frequently two calves at a birth. I have never been able to understand the reason of the name "hog-deer," except that it is generally found in high grass and the same places that are infested by wild pigs. In certain districts the *C. porcinus* is very common, while in many other portions of India it does not exist. It generally lies close to the ground in very high grass or dense bush, and will not move until it is beaten out, or almost trodden upon by a line of elephants. They are difficult to hit with a bullet from the howdah, as

they can seldom be seen distinctly, owing to the great height of the grass, through which they rush at a tremendous pace when kicked up by the advance of beaters. I am not ashamed to use buck-shot, or B.B. in one barrel of my Paradox gun, which is admirably adapted for a snap-shot. When fired at, if wounded, or even if missed, the hog-deer will sometimes rush forward for 50 or 100 yards, and then squat, to conceal itself in the dense grass. It will lie perfectly close until the elephants arrive within a few feet, and then start off at its usual extraordinary pace.

In some of the churs of the Brahmaputra there are great numbers of these deer, and now that the tigers have been almost extirpated, I have no doubt they will increase. Although the hog-deer cannot be said to afford great sport, it much enlivens the day, and it is excellent practice for the nerves of elephants, as it keeps them upon the strain for hours together when marching through the grass.

There is a species of deer in Japan which closely resembles the fallow-deer of Europe, excepting the difference of antlers. The Japanese variety is not palmated, but round, like those of the red-deer; they have four points upon each horn, *i.e.* the brow, and two tines in addition to the extreme point. I have several specimens in my possession which I procured in Japan, but I did not myself shoot them, although I accompanied the native hunters among the mountains bordering Lake Biwa upon several occasions.

The country is very precipitous, and the habits of this variety induce it to cling closely to the protection of the woods, where deep ravines and overhanging precipices afford a secure asylum. The only method of shooting in such a country is by driving; either by beaters, or by disturbing the forest with dogs, and posting guns in well-known passes where the deer will probably run through.

There were eight or ten Japanese hunters with me, one of whom was an enthusiastic old Nimrod of seventy, who prided himself upon his activity and the sureness of his aim. All these people were armed with matchlock rifles, exhibiting a step in advance of the Indian shikaris, whose matchlocks are generally smooth-bores.

They were indefatigable fellows, and we worked from daybreak until after sunset; upon one occasion we did not return until two hours after dark.

When I saw the thoroughness of these native hunters, and their intimate knowledge of the mountains, and habits of the game, I could not help wondering that any deer remained. Nevertheless we always found, and no beat was ever blank. Several times I saw deer rushing through a valley when I was perched upon a rock out of distance, but nothing came towards my position. The cracks of native rifles showed that they had posted their guns in the proper passes, but with all their good intentions, fortune did not favour me. Several deer were killed, and had it not been for the difference in the horns, I should not have distinguished

them from fallow-deer, as they were the same in size and colour. The summer coat is prettily spotted, but in winter the stags are a russet brown.

In the northern island there are great quantities of these deer; but I was informed that it is by no means a sporting country, being generally a mass of forest, in which no shooting could be obtained without a great number of beaters; these could not be procured. There are large black bears in Yezzo; these also are impossible to discover by any stranger, who is not thoroughly conversant with the forests and the language of the inhabitants. I saw two live specimens of the bears in Tokio; they appeared to be exactly similar to the black bear of North America.

When in China, I saw tame deer similar to those of Japan. These had been brought from the interior. I have also seen deer (alive) from the island of Formosa, which had round horns, but I could not say positively how many points.

There is an exceedingly small deer in China, that weighs about 25 or 30 lbs. I have seen several when shooting, but never myself shot one. These are in very great quantity, and although they are generally either single or in pairs, a large number are shot annually, when the shooting season commences in Shanghai, and parties with their house-boats start for the interior by river and canal. In the commencement of November a charming trip may be arranged from Shanghai, as the house-boats are conveniently fitted, expressly for

the purpose, and there is no limit to the area where pheasants, wild-fowl, snipe, deer, and wild pigs may be shot, without the slightest difficulty or personal exertion.

There are several varieties of small deer both in Ceylon and India. The barking deer (*C. muntjac*) is an exceedingly pretty creature of a light red colour, which occasioned the name given to it in Ceylon, "red-deer." This little animal affords some amusement in the low country of that island with a scratch pack of native dogs, as it has a very powerful scent, which the dogs seldom lose; it never goes straight away, but runs round the numerous undulating hills, across the paddy-fields in the bottoms, back again over the summits, and is generally killed in the thick bush, after having left its mark upon one or two of its pursuers, in some awkward cuts with its sharp tusks.

These are like boar's tusks reversed, projecting from the upper jaw and turning downwards. They are very long and sharp, and inflict wounds of greater extent than would be expected from so small a creature.

There is also in Ceylon a diminutive species, the mouse-deer, which is not larger than a hare. The male of this variety is devoid of horns.

Although I mention this most insignificant variety, it may be remarked that I have omitted the name of the largest of all the Cervidæ, the moose (*C. Alces*, Lin.) This is intentional, as I have never seen the species in a wild state. The object of this work was

to place before my readers the experience which I myself have gained, therefore I do not attempt to include every creature which may be classed among wild beasts.

Many years ago, when reviewing Mr. G. P. Sanderson's excellent work, *Thirteen Years with the Wild Beasts of India*, in the *Quarterly Magazine*, I wrote the following critical remarks, to the spirit of which I rigidly adhere:—"When we consider the difficulty attendant upon the study of wild animals in their native pastures, we may at once agree that a limited experience must be of little value to the lover of natural history. The book we require as a standard authority must be the result of many years' practical study, and intimate association with the animals described. It is impossible that one man can have had experience sufficient to embrace all portions of the world, and the fault of many writers consists in their attempting too much. If an individual will confine his description to that particular branch of sport and natural history which he has carefully mastered, and neglect all hearsay evidence, but relate only that which he has positively accomplished and personally witnessed, his book will be received as a welcome exception to the general rule."

Upon this principle, I do not intrude upon the province of others who have had experience in countries which I have not visited. I have no practical knowledge of the animals of the Himalayah range, therefore I say nothing concerning them. The admirable work of Colonel Kinloch, *Large*

Game shooting in Thibet, the Himalayahs, and Northern India, embraces the numerous species of sheep, the yak, and the various interesting fauna of those high altitudes. To such works the public can refer with confidence, in the knowledge that the writer describes what he saw, and not what he had gathered from doubtful hearsay.

CHAPTER XXVII

CONCLUSION

In taking leave of "Wild Beasts and their Ways," there are certain destructive creatures which can be hardly classed under this denomination, but throughout the Indian empire they exist in such enormous numbers that it would be interesting to obtain some approximate computation of the money value of the crops which they destroy. These enemies are monkeys, parrots, and flying foxes.

The monkey is sacred; this pest is accordingly permitted, *carte blanche*, to pillage at discretion. The mischief committed by these creatures is most serious, but as this has continued for many ages, the people have become inured to their depredations.

It is a curious fact that, although monkeys and apes are closely linked with the human species, they never can be trained to anything that is really useful. They are not companions to man, like the dog, but they are simply caricatures of the human race, and if every monkey and ape could be destroyed by one flash of lightning, so that they ceased to exist in the

world, no one would miss their society, but everybody would be glad of the riddance. India would feel that an incubus had been removed from her agricultural industries.

I have seen at least eighty or a hundred monkeys in one small field of wheat, carefully picking every blade of corn; this was in a plot adjoining a jungle, which afforded a quick retreat. The natives guard their crops more or less, and sling stones or dry lumps of earth at the invaders, but they are generally regarded with ridicule, and the monkeys eventually gain their ends.

Ahmedabad, which is one of the largest cities in Western India, is infested with the large gray monkeys, known in India as "longoor" (*Entellus*). These may be seen at all hours sitting upon the tiled roofs, staring at the city throng and the crowded streets, no doubt moralising upon the stupidity of human nature, which is forced to labour, whereas the wise monkey lives by the pilfering of its hands.

In Ahmedabad it is a common trick upon an unpleasant neighbour, to throw a few handfuls of gram (a sort of pea) upon his roof. The tiles being always loose, the gram sticks between them, and some finds its way beneath. The monkeys in their wanderings are certain to discover the much-loved food, and with the greatest diligence they lift up the tiles, and turn them over to discover the grains that are concealed below. The first heavy shower informs the owner that the monkeys have been

gleaning upon his roof, and improving the arrangement of his tiles.

These wretched animals entirely destroy the fruit. I have seen large tamarind trees left completely bare. It is astonishing how they can eat the unripe tamarind pod, as the acid is intense; but they munch this with avidity. They also eat the leaves.

When the mangoes change their foliage in March, the various tints of colouring are most beautiful. Some varieties burst forth in a vivid green, others dark; some will be a bright copper colour, and a few deep purple. The monkeys then delight to eat the young foliage, and in some cases nearly strip the tree. When the mango fruit is swelling in late April, but still unripe, it is dreadful to see the utter destruction entailed by a large troop of monkeys. It is not what they actually consume, but the immense quantity which they spoil, by recklessly biting hundreds and thousands of unripe fruit, and throwing them, discarded, upon the ground.

The flying fox (*Pteropus*) is also a great enemy of the fruit trees. This large bat is frugivorous, but also an insect-eater. Although its habits are nocturnal, it exposes itself during the day by roosting in many thousands together upon certain large trees.

I have seen tamarind trees the size of our largest oaks so completely covered with many thousands of these creatures suspended head downwards by

the hook at the extremity of the wing, that the entire tree looked as though covered with old leather bags. The ordure of these bats poisons and destroys the foliage of the tree which they monopolise as their meeting-place. They vary in size from 3½ feet to 4 feet 2 inches, which is the largest I have measured from tip to tip of out-stretched wings. They have only two young ones, which cling to the breasts and sides of the mother during her flight. The head of this species resembles that of a very small fox; hence its name. The teeth are differently shaped from those of ordinary bats (*Vespertilio*, Lin.), as the grinders denote the quality of their food, which is chiefly vegetable. There can be no doubt that they destroy great numbers of nocturnal insects, such as moths and beetles, as they invariably appear immediately after sunset, and may be observed at an altitude just above the upper foliage of the trees, where they remain flying to and fro, evidently in pursuit of winged creatures which have issued from their hiding-places at the same hour.

In Ceylon, where toddy is extracted upon an extensive scale from the groves of cocoa-nut plantations, the chatties, or earthenware pots, which are suspended to receive the flowing sap, are carefully protected from the flying foxes with covers of plaited palm-leaves, otherwise these creatures would not leave a drop.

They are not vicious, as they never attempt to bite when wounded.

The bat tribe generally are most serviceable as

destroyers of insects. I remember when, upon the White Nile, our diahbeeah was swarming with large cockroaches, that were far beyond our powers of extermination. These horrible insects are well known to be more than usually active during night. Bats were our welcome allies. There was a small variety which entered the open windows, and amused themselves till daylight in hunting our enemies. No American Indian conld have been more particular in the arrangement of the scalps of his slain. In the morning, the divan (or sofa, against the walls of the cabin) was ornamented with neatly made piles, about 2½ or 3 inches diameter, composed of the horny legs and wing-cases of large cockroaches. I imagine that each bat kept its separate pile, which must have contained the indigestible and rejected portions of about 15 or 20 of the insects.

There are numerous animals, more or less interesting, which hardly belong to the classification of wild beasts. There are the wild asses of the desert, most beautiful and agile creatures, quite unlike the humble donkey of our civilised surroundings. In these we see the reverse of evolution.

The wild ass is widely distributed both in Africa and Asia, and it exhibits its connection in various colourings and affinities with the quaggas and zebras.

The true wild ass is an animal of the desert. It is intensely shy and difficult of approach, and far exceeds the horses of the country in swiftness and endurance. The only method which is successful for capturing these animals is to pursue them with

fast dromedaries when females are accompanied by young ones. A chase by three or four well-mounted Arabs will, after a hunt at full speed of several hours, separate the tired little ones from the long-enduring mothers. The small foals are then caught and slung upon a camel, in the same nets that are used for transporting the camel calves when too young to follow on the march.

The nature of the wild ass defies all attempts at breaking it for domestic use. It is kept specially for breeding, as the cross with the ordinary donkey produces a superior animal, which is highly prized by the Arab sheiks of the great desert.

The wild ass is found at so great a distance from water that the Arabs declare it only requires to drink every third day. I can readily believe this, as it is extraordinary to observe in countries of great thirst how animals adapt themselves to the necessities of their localities. During the dry season, between Sofi, on the Atbara river, and Kadarif, there is a long interval without water, although the land is rich and fertile during the rains. The cattle march 25 and 30 miles to the river, and during the dry months they drink only upon alternate days. When we see the fact established among domestic animals, we may readily accept the Arab's accounts of desert creatures, which have been born under conditions that could hardly be supported except by those whose progenitors had been inured to similar hardships and necessities.

The first and last time that I ever disturbed

wild asses was in 1861, when, after a most arduous chase through the desert in the hottest season of the year, I shot a male. This was a large and beautiful specimen, much more like a very large zebra without the colouring, than a donkey. It was about 14 hands at the withers, which were as usual low; the hoofs were exceedingly large, in no way resembling the contracted foot of the domestic species. The colour was a deep cream, with a tinge of strawberry upon the back; a black line along the spine and across the withers. The eyes were beautiful, exceedingly large and bright.

I was sorry to have shot this harmless animal, but it had a glorious revenge. On the following day I was prostrated with sun fever and violent indigestion, having dined off asinine *cotelettes* from my new specimen of a male wild ass. From the dryness, toughness, flavourless and impossible character of the flesh, I could well imagine that this hardy offspring of the desert had never drunk water, nor had had anything to eat except wood, hot dust, and porphyry, and that it had existed upon this food for centuries.

In 1873 the late great sheik, Hussein Khalifa, presented Lady Baker with a most beautiful female donkey, which had been captured when small, but had never been tamed. This pretty but desperate present required a number of men to introduce her to our yard in Berber. She was secured by two strong ropes around her neck, the ends of which were well manned upon either side to prevent her

from seizing her conductors with her teeth. Kicking, rearing, biting, and striking out with the fore legs, this interesting acquisition formed a startling picture of a lady's pet. The question was serious. We could not return it, lest we should offend the donor; we could not let it run away (this wicked idea certainly passed through my mind), as it would be regarded as an insult; but how should we march this wild animal 270 miles to Souakim, and then ship to Suez?

Kindness might possibly accomplish this, and my wife took it in hand, to the horror of the Arabs, who would not approach it.

The savage creature became so tame and affectionate after only three days' personal care and handling, together with gifts of bread and pieces of sugar-cane, that all our people were delighted with the success. It marched to Souakim, being led by a halter, without the slightest trouble, and was delivered in Cairo to His Highness the Khedive Ismail. No one had ventured to mount its back.

There is another animal whose importance to man cannot be over-estimated, and, although it cannot claim the distinction of a wild beast, it must not be omitted from our consideration, especially as it is so frequently linked with the military operations of our army. This is the camel (*Camelus*).

It has been debated amongst naturalists whether this animal has been actually proved to exist in a wild state. It has been asserted that wild camels

have been known in the deserts of Central Asia, but were these originally wild? or were they simply animals that had strayed and become lost during tribal raids, or in the Mongolian migrations of the early ages?

Lieut. Younghusband, in his splendid journey from Peking to Rawul Pindi, saw camels in the distance upon the steppes, which were reported by his people to be wild. He described them as smaller than the ordinary domestic camels. There could not be a more trustworthy authority as a traveller; but considerable experience of a locality and an actual examination of the animal are necessary before it is possible to determine whether it is aboriginal, or whether it may not be the descendant of some lost or strayed ancestors.

There are two distinct species of camels—the Bactrian, with two humps, and the Arabian, or ordinary camel, with only one. The camels in the deserts north of the Himalayahs, which are reported as wild, have only one hump; this does not favour the assumption of their origin. Where are the progenitors of the two-humped species? These should be derived from Northern Asia, as no such animals are to be found either in Africa or Arabia. There is a peculiar mystery attached to the origin of a camel which is difficult to fathom, as it is one of the oldest historical animals, and has been connected with man, as the recognised beast of burden, from the most ancient period. The llama of South America is accepted as the repre-

sentative of the camel in that country, but it is like the alpaca, a small animal without any hump, and in noways resembling the camel in its habits.

There is no domestic animal that would so easily accommodate itself to the change to a wild state as the camel, should it be lost through straying in search of food, or through the destruction of its owner.

It will eat almost anything in the shape of grass or bush. Nothing is too coarse or prickly for its impenetrable mouth and tongue.

A couple of years ago a travelling menagerie camped near my home in South Devon, and the camels were turned out to graze in a meadow hired for the occasion. Like most Devonian fields, the grass was full of vigorous thistles. I knew what the camels would do; I therefore watched them. They cleared the field of thistles in preference to the herbage.

A camel that has been lost would discover food of some kind upon the barren surface of most deserts; and should it be within reach of water, it would resign itself immediately to its new conditions.

If the camel is not required to labour, it will exist upon very little, but that "little" must be provided.

It appears to be a generally accepted belief that the camel, because it has been poetically termed the "ship of the desert," requires neither sleep, nor food, nor water; that it will carry any weight;

and that, when loaded, a couple of soldiers may mount upon its back without increasing the burden. It does not matter in the least whether the saddle fits, or whether it is properly stuffed, or whether the hungry animal has eaten the stuffing from its own saddle when unloaded for the night. In this manner the camels are generally neglected in our military expeditions.

When it is considered that the success or failure of every expedition must depend upon the transport, it is astonishing that the organisation of the camel corps should be so lamentably neglected.

In the last Afghan campaign 61,000 camels actually died from starvation and over-work. The country has not yet recovered from this terrible mortality. The few weeks between Korti and Metemma in the Soudan expedition were sufficient to disable all the transport animals.

I have had a long experience in desert travelling, and I strongly advise (whenever possible) the *hire* of camels with their owners, instead of purchase. If it is absolutely necessary to buy, the greatest care must be directed to their backs, and all those should be rejected which exhibit old scars of healed sores, as these are almost certain to break into wounds after a few weeks' hard work.

The camel-saddles must be rigidly inspected. These should be stuffed with rice-straw, or other

tough material that has not been broken by thrashing, but simply the heads cut off the stalks. A thick padding stuffed with wool (not cotton) should be next the back. The saddle must be arranged so that, when loaded, it is quite 3 inches clear of the hump.

It should be remembered that extra stuffing is required, as the animals are sure to lose a certain amount of flesh, in which case, the saddle which fitted at the start will become too large. If once a sore is established during a long expedition, the camel is doomed. The pain exhausts the poor animal; it ceases to feed, and quickly becomes a mere skeleton; and dies. Marching throughout the night should always be avoided, as nothing distresses both men and animals so much as an interference with the natural hours of food and rest.

If the bugle sounds at 2.30 A.M. the camels will be loaded and the march commence at 3.30. They should continue until 11 A.M. This will be $7\frac{1}{2}$ hours, which at $2\frac{1}{4}$ miles an hour will complete a march of about 17 miles. This arrangement affords seven hours of daylight for the tired camels to graze; they should be given about 2 lbs. of dhurra (*sorghum*) each before the bivouac for the night; the saddles being arranged close to their respective camels, to prevent confusion in the early morning, or retained upon their backs should the night be cold. If it is necessary to make forced marches, the same hours of starting and

marching may be observed, but an extra two hours' march may be added from 4 till 6. This will add 4½ miles, making 21½ during the day. During the hottest time of the year I generally managed in this manner between the Nile and the Red Sea, but the desert being good, we made better speed, doing 2½ instead of 2¼ per hour.

It must be remembered that the camel, if *a real desert animal*, will march in the hottest season three days without requiring water. During the kharîf, or winter, it will march six or seven days without drinking. The camels must be taken to the water when they are loaded ready for the start. This tightens the girth-ropes, which should be arranged to allow for the expansion.

I have put in italics the "real desert animal," as much depends upon the breed and habits of the camel. There are enormous camels in Alexandria and Cairo that will carry 700 or 800 lbs., but they would be utterly useless in the desert. These animals are fed upon "burseem," a species of clover which is cut green; they also drink daily during the hot season, and upon alternate days during the cold weather.

If these camels were introduced into the deserts of Nubia, they would be more akin to horses than to camels, as they would require the same attention to provender and water.

The Bishareen camel is much esteemed as a hardy beast, although it is not powerful in

appearance. Upon a flat surface it will travel with 500 lbs., but in a hilly journey all camel loads should be restricted to 400 lbs.

The Hadendowa animals are celebrated for rocky and uneven ground, as they are born and bred among the mountains. This breed is very sure-footed, and from its continual practice upon a rough surface, it does not get foot-sore during a march over broken rocks. Between Berber and Souakim there is a portion of the route strewed with obsidian; this somewhat resembles broken bottles, and is very dangerous to the feet of camels.

It is a difficult matter to obtain a first-rate riding dromedary. The name is merely optional, as there is no distinction except the appearance of "thoroughbred," such as would be denoted in a horse. The Arab sheiks decline to part with their best "hygeens" upon any terms, although as a personal favour they will sell you an inferior animal with a magnificently false reputation.

A really good hygeen, carrying one rider upon a light Arab saddle known as the "mogaloofah," should travel 80 miles, if for only one day, at about 5 miles an hour. The same camel would cover 60 miles, at 6 miles an hour. Such a first-class animal would continue to travel 60 miles daily throughout the week at this pace, resting occasionally during the day's march.

When we consider that Weston the pedestrian

walked 5000 miles in 100 consecutive days, making an average of 50 miles a day throughout that lengthened period, the performance of the hygeen does not appear remarkable; but Weston could eat and drink when he pleased. The wonderful advantage of the hygeen lies in this: that a certain distance is absolutely devoid of water or forage, it therefore would take three days of forced marching, during which the baggage camels must carry their own food, in addition to their loads; the hygeen does this in one day! Wonders may be accomplished in desert travelling with camels if properly managed; but we usually challenge misfortune by committing the charge of these animals to those who are perfectly ignorant of their habits or character.

Sometimes the male camel is exceedingly vicious, especially at the rutting season, which is announced by the excretion of an oily fluid like coal-tar from the back of the neck. When angry at this period, it blows a large bladder from the mouth, which remains distended for more than a minute before it disappears. I have seen a male camel attack the people in every direction (fortunately hobbled); and although they beat it with thick bamboos, it was in noways cowed.

The bite of a camel is very severe, and fatal accidents have occasionally resulted from the periods of excitement in the male. The teeth of the camel are peculiar. Cuvier thus describes them:—"They have not only always canines in both jaws, but have

also two pointed teeth implanted in the intermaxillary bones, six inferior incisors, and from eighteen to twenty molars only; peculiarities which, of all the Ruminantia, they alone possess, besides which the scaphoid and cuboid bones of the tarsus are separated.

"Instead of the great hoof, flat at its inner side, which envelops the whole of the inferior portion of each toe, and which determines the figure of the ordinary cloven foot, they have but one small one, which only adheres to the last phalanx, and is symmetrically formed like the hoofs of the Pachydermata. . . . Their extreme sobriety, and the faculty they possess of passing several days without drinking, cause them to be of the highest utility.

"It is probable that this last faculty results from the vast masses of cells which cover the sides of their paunch, in which water is constantly retained or produced. The other ruminants have nothing of the kind."

I cannot agree with Cuvier in accepting the word "produced." As I have already described, the Arabs invariably let the camels drink immediately before starting on their journey. The animals drink their fill, and take a considerable time, resting between their long draughts. They seem to be aware, when loaded, that they have a long journey before them, therefore from a natural instinct they prepare for the thirsty desert, and fill their cells; but those cells do not "produce" water.

The fact of a camel being a ruminating animal is

immensely in its favour as a beast of burden, where long tedious marches are necessary at all hours, either of day or night. This should be carefully considered, as supporting my view that the march should as much as possible be confined to daylight.

All ruminants are quick feeders. An ox or camel will make a snatch at a bunch of grass without halting, but quickly as it passes it upon the march. In this way they are always feeding, even while they are moving, if either bushes or grass are present; they lose no time or opportunity; and the fact of this food excitement in looking out for something to eat, whiles away the time, and lessens the weariness of the journey.

When night arrives, they have not only the enjoyment of rest from the day's labour, but the intense happiness of ruminating. Should the camel have had no supper, he can nevertheless munch up his morning meals by ruminating until he sleeps.

I sincerely trust that upon our next Oriental expedition, whenever the services of camels may be required, some special and most stringent arrangements will be made, that will throw the entire responsibility for the transport service upon the shoulders of officers who have not only knowledge, but a personal pride in the condition of their animals.

With native owners the loss is a mere nothing, as they are sure to take the ordinary care to which these beasts have been accustomed; but if camels are left to the tender mercies of inexperienced young officers

and the British soldier, the wind may be tempered to the shorn lamb, but nobody will take care of the camel's back.

Camels differ in size as much as horses. I measured a riding dromedary (hygeen) that belonged to Sheik Achmet Abou Sinn, of the Shookerieah tribe; this fine animal was 7 feet 2 inches perpendicular height from the hump to the ground. As a general rule, the hygeens are not so powerfully proportioned as those which carry baggage, and the Arabs are very particular in refusing to place a heavy weight upon a choice animal, as they declare, with good reason, that it would spoil the elasticity of its pace.

A good hygeen is worth from 80 to 100 dollars in the Soudan, while a powerful baggage camel can be purchased for 12 or 14.

The female produces only one at a birth, but the calf is not permitted to monopolise the mother's milk; she is kept for the daily supply of the proprietor, as our cows in Europe are managed for the dairy. Camel's milk is richer and more nourishing than that of any other animal, in the estimation of the Arabs. Barren females are frequently killed for their flesh; this is far superior to any ordinary beef from the oxen of the Soudan.

The camel is certainly the most useful beast in Africa, as without its aid the deserts would be absolutely impassable; but although indispensable to man, it is a stupid beast, that exhibits no affection whatever towards its master, and never shows the

slightest sign of intelligence under any circumstances. The only time that it appears contented is when the Arab arranges a pile of dhurra, carefully measured in double handfuls according to the number of his beasts; this is placed in the centre of a mat, upon which the Arab sits, while perhaps eight camels kneel upon the ground with their heads converging in a centre, all intent upon the heap of corn, each endeavouring to swallow more than its due proportion. The Arab continues to rearrange the heap while it is growing less, occasionally pushing an extra mouthful towards a weaker animal that is bullied by a greedy neighbour.

I never lose my interest in camels, as they have carried me faithfully during many years over some thousands of miles; but the time will arrive when light narrow-gauge railways across the deserts will relegate this animal to a different duty, in conducting the traffic for short distances to stations upon the main line, instead of being, as at present, the tedious and only means of conducting the commerce of an enormous area.

. . . . . .

I conclude my reminiscences of wild beasts and their ways with the hope that the pleasure the study of natural history has afforded me through life will be enjoyed by others whose tastes are similar, and who may accompany my own experiences as I have narrated them. Although an ardent admirer of nature and her mysterious

laws, I am not one of those who regard them as perfection: it is an irresistible law of force, by which the strong predominate, and the weak must suffer. In every direction we see a struggle for existence; the empty stomach must be filled, therefore one species devours the other. It is a system of terrorism from the beginning to the end. The fowl destroys the worm, the hawk destroys the fowl, the cat destroys the hawk, the dog kills the cat, the leopard kills the dog, the lion kills the leopard, and the lion is slain by man. Man appears upon the scene of general destruction as the greatest of all destroyers, as he alone in creation, wars against his own species. We *hear* of love, and pity, and Christian charity; we *see* torpedoes and hellish inventions of incredible power to destroy our fellow-creatures. The inventors of these horrible engines of destruction receive titles and the highest honours, while those who have worked in progressive science for the welfare of mankind are forgotten in the obscure laboratory, although the saving light which they invented is gleaming above the hidden rock, for the benefit of all, to expose the danger of the sea. Thus with one hand we save, with the other we destroy.

This has been the principle since the original creation. The civilised world boasts of its progress in civilisation, and of the modern triumphs of knowledge, science, and general education; but those countries which command respect in the councils of the world are the possessors of the

big battalions. "Force," the great law of nature, will assert its power, and rule.

It is a relief to enjoy nature in her wild and unrestricted solitudes far away from the intrusion of mankind; it is there that we see her in the fullest charms. Although we know that one species preys upon another, we do not feel it, as the painful scenes are not apparent; we see a giant trunk prostrated on the ground, covered with moss and lichens, and brightened by many-coloured fungi; we forget that these are preying upon the dead body of the once glorious tree. We remove the rotten bark, and disturb panic-stricken ants and beetles, together with the larvæ of many other insects; it hardly occurs to us that they also are attacking the remains of a dead giant. A continual change is taking place. A bird drops the seed of a bo tree (*Ficus religiosa*) upon an ancient temple; it germinates, and by degrees the roots penetrate through a thousand unknown crevices in search of moisture and support. The young tree has determined to live upon the ruin of that temple; in the course of time the expansion of the growing roots splits and tears asunder the great mass of masonry.

In the same manner, a seed of the bo dropped into the huge forked centre of some great forest monarch, which contains the first signs of rottenness within, quickly germinates, and takes complete possession of the old trunk; it drives its insidious roots down into the very centre, and subsists upon

the destruction of its victim. These are among the changes that prove the rule of superior force throughout every portion of the earth; and in every drop of water that is sufficiently impure to have generated animalcules. In that one drop, the microscope will show the monsters of the tiny ocean, invisible to the naked eye, but the strong are devouring the weak, as the rotifera swallow down the helpless victims in unresisting shoals. There is in the ferocious instincts of the microscopic insect the same fury of attack as in the cruel shark, although unseen by the unaided human eye. The spider emulates the fisherman in the construction of its net, both guided by natural laws, reason, instinct, and desire, to catch and kill something that will enable it to subsist.

The lover of nature will never tire of studying her ways. When young, he will wonder and admire; when old he will reflect, but still admire. In all his studies he will discover one great ruling power of individual *self*, whether among the brute creation or the vegetable world. Of the civilised world I say nothing.

In his wanderings as a naturalist he will remember, that should he endeavour to study in their secluded haunts the wild beasts and their ways, the law of force will be always present; it will accordingly be wise to secure the force beforehand upon his side, and no more trusty companion and dependable agent can be found than a double-

barrelled ·577 rifle, to burn 6 drams of powder, with a bullet of pure lead 650 grains. This professional adviser will confirm him in the theory that "the law of Force will always govern the world."

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